Well, welcome friends. Today we're checking back in with Glenn Corrie, he's the CEO of Hazar Group, HZR is the ticker code here.

It's a follow-up to an interview we had in November of last year, so it's only about seven months or so.

Yeah. Mm-hmm.

But I was just saying to Glenn off air, I was like, "Wow, a lot has happened in that short space of time."

The very short version of the story here, and I'll get Glenn to flesh this out in just a moment, is they've got this really cool proprietary tech, this methane pyrolysis, that effectively takes this sort of natural gas, biogas feedstock and splits that into two clean and valuable products, namely hydrogen and also graphite.

And it does so with pretty much no carbon dioxide emissions.

So when we last spoke, Hazar was really getting close to that sort of commercialization phase, and today we're very much sort of moving more firmly into that kind of territory.

We've got revenue being generated from multiple projects, have just finalized an agreement recently. We'll get into all of that.

Things are still ticking over with the partnership with KBR.

Yeah.

So lots of exciting things that are happening.

Yeah.

What else can I say here? Actually, I'm just going to shut up at this point.

I'll give my two normal things that I have to say, which is, one, it's not advice, and two, we've got some great questions that have come through, but if any more come up, use that Slido link and I'll put them to Glenn when we've got the chance.

But, yeah, I'll shut up for a moment. Glenn, how are you going?

Good to see you again.

Good. Yeah. Good to be back. I can't believe it's November.

I know, right? It's just-

It goes quick and a lot happens, but

that's the excitement of all this. So great to be back.

Yeah. And so I always try to

sort of make sure everyone's up to speed here.

That was a very rough and, I'm sure, pretty

oversimplified overview of the business.

How would you flesh it out a little bit for us, for those that haven't come across

Hazar before?

I think you explained it really well. I always work on the grandma principle.

If granny doesn't get it, then nobody gets it.

So as you've rightly said, we transform or

convert gas in the form of methane.

We split a methane molecule into clean hydrogen,

and carbon in the form of graphite, with zero

carbon emissions, as you've rightly identified.

So it's a zero emissions process.

The X factor, as we've always talked about, is the use of an iron ore

catalyst. Iron ore's cheap, it's abundant, it's readily available

in global supply chains all around the world.

And that catalyst effectively is our competitive

advantage in that it reduces the

operating temperature of our process

by 30 to 40 degrees relative to everybody else in the

competition space.

Mm-hmm.

So we're able to

deliver

a very cheap,

and well, affordable,

clean hydrogen product to a customer,

far cheaper than anybody else that can do it today.

Certainly cheaper than electrolyzers, as we've explained in the past.

And we have that very valuable co-product.

We don't use water in the process. It's a very low energy

intensive process. It's in the order of eight kilowatt hours per kilogram of

hydrogen. If you compare that with electrolyzers, which is green hydrogen,

as they like to call it, that's 55 kilowatt hours.

Mm.

So you can see immediately that for the chemists and the engineers-

Yep

... there's a seven to eight times difference in energy.

That's a seven to eight times difference in cost-

Yep

... to produce hydrogen.

Yep.

So that's our competitive position,

and that's the technology. It is ready.

Today, it is low cost. We're on cost parity

with the industry that is currently using hydrogen.

And we're scalable, which is a really important component of climate techs.

If you can't scale and be low cost-

Yeah

... you're forever going to be challenged, and I think green hydrogen electrolyzers

are seeing that today. Which is our space, right?

We're now creeping into this-

Yep

... with a pragmatic, practical, ready solution.

So yeah, really exciting time.

Yeah. That's what interests me with Hazar, is that there's lots of

companies out there that are working on really cool tech and they've really

promising early-stage results, but as you say, it's like taking something

from the lab,

scaling it up-

Yeah

... and making it commercially viable.

There's a huge amount of engineering that goes in all of that, and that's-

Yep

... frankly, that's why a lot of companies sort of list, "We've got a great idea,

help us get to commercialization."

Yep.

And the market's being the market, so it always tends to be anything

longer than a day is too long.

Fair enough.

And people get excited for the potential, and then they get impatient.

And then the

other part of it that's very interesting is that, and it's through no malfeasance

or incompetence or anything like that, but engineering and science and tech is

hard, right?

Yeah.

So often you sort of have this really promising kind of thing, and it just

never quite, for whatever reason-

Yep

... makes it.

Yep.

But if I'm reading you right and reading the materials right, it's kind of like

there's no longer a question mark here.

Now it's kind of like, we're here, we've got it, it's working. Who's interested?

Yep.

Is that a fair-

Exactly. That's perfect because I often explain it as the valley of death,

and you'll hear that in techs a lot.

Yep.

And

some of your listeners will be appreciating that, well, there's more than one

valley of death in a technology as you develop it.

We're TRL seven to eight, which is very advanced.

Yep.

That's the technology readiness level.

I think we've navigated through, now, all of those valleys

quite comfortably. It was never easy, right?

If we go back 15 years with this-

Yeah

... it's always difficult developing and scaling.

And we've been on that journey

almost 18 years

now. We've scaled this five times.

Mm.

So to your point, the tech is substantially de-risked.

You're always going to have some risk-

Sure

... but our risk is not technology risk, it's more-

It's risk on the fringes of have we got our reactor?

Is the pressure the right and the levels, is the temperatures the right?

Are we getting enough heat and conversion?

So we've de-risked it,

and we're in that commercialization frame now where we're starting to

get customer demand-

Mm

... and we're starting to work through projects.

We brought KBR on board almost 12, well, in fact, just slightly over 12 months

ago.

Yeah.

We now have a design package

for one of these that goes as high, as large as 30,000

tons per annum, which is big enough for any industrial facility.

Mm.

That took 12 months to get into place.

Mm.

But the economics remain robust at scale.

They're getting better.

Yep.

The reactor scales to the right levels, the process scales to the right levels.

We see economies of scale,

and we are validating our economics.

So we're in a good position to now get in front of customers as we

have been, and we're starting to get those real bites

from real, genuine, bona fide customers that

see the potential of what we're trying to do.

Yeah.

I said earlier, three years ago, that was more difficult because we've had the

headwinds of the hydrogen space and the

cost challenges.

Mm.

But our demand has not slowed down.

Our demand has actually accelerated, and it's got more serious with

genuine potential off-takers here around the world.

So they take time.

Yeah.

Andrew, my biggest risk is not tech risk anymore.

I'm dealing with multinationals,

30, 50, $100 billion companies that just take their time.

Yeah.

And so I think we're starting to see a bit of that.

Yeah.

But look, we've got a large portfolio of opportunities.

Mm.

Several of these will drop, and I think people will start to recognize the true

underlying value of

the company.

I'm really trying not to say the same damn thing I say every time, but

you sort of set me up there, Glenn, and I can't help but

sort of say it, but it's that overnight success that's 18 years in the

making, right?

Yeah. Well-

It's that kind of thing-

Well, we had one.

Yeah. Go on.

Well, we had one shareholder, if you don't mind.

One shareholder said to me, "Glenn, you know what?

I was an investor in Fortescue 20 years ago, and you're showing the
same signs of Fortescue in that it muddled along for a little bit,
and then it just took off." So look,
I've been here for four years, and we've been
converting a science thing into a commercial business, and
that's how long it takes-
Yeah
... to turn these sorts of things into commercial outfits with
KBR. You see our public pipeline in North America,
in Asia, in Europe,
in South Korea. And now,
we're obviously being public about our position in Whyalla.
Yeah.
So you can start to see that we've got a pretty good coverage globally.
Yeah.
And we continue to get that strong demand.
But it just takes the time to get there.
But all the building blocks are there.
And I'm impatient as anybody,
but we just focus on unlocking projects and just trying to demonstrate
to investors and shareholders in the market that, look, this is deep underlying
value here.
Yeah.
It's unfairly valued at the moment, in my view, but we'll get there.
And we'll just continue to get that out there so people can see the true value of
this platform.
The other broken record thing
that I always tend to say too is that-- I guess I

bring it up because I think it's relevant, but also, I find it so
amazing or just odd, I suppose,
in the field of science,
technology, engineering, and science is my background, and I always had this naive
view. It's like, well, the science works. The science works.
It's not up for debate. Just do it.
But humans are humans, and the thing that you observe on the share
market is the potency and the
importance of that first, not necessarily the first, but perhaps
the first noticeable, the first noteworthy
reference site where when you knock on
subsequent potential customer doors-
Yeah
... rather than going, "Hey, here's a spreadsheet, and look at all of this, and
here are the numbers, and the engineering," it's just like, "Don't care." When you
rock up and say, "Oh, Whyalla Steel Works is using it and they're making this
much per year," it's like, "Oh,
where do I sign?" There's something about that social
proof that I just
know opens a lot of doors because-
Yeah
... no one wants to be the first one to cross the line, right?
Yeah. The first is the hardest.
Yeah.
And I've always said that. And of the first, the last 5%'s the hardest.
Right.
So you've got sort of this challenge of getting there.
And we've got some very advanced projects.
But the one that resonates with people is our position in Whyalla because it's

proximity bias, right?

Yeah.

It's down the road from many people, and it's a very strategic thing

for Australia, also very strategic for steel making globally.

So it's interesting how the market views it, but I've just found that,

look, we've moved away from what I call PowerPoint into

Excel.

Mm.

And I'm a physicist by background, and I

love the numbers too, but it's just nice to see

that our customer base is looking at the details

and not looking at PowerPoint slides.

Mm-hmm.

And they're looking at the granular detail of conversion rates and

costs and scale-up numbers and-

Mm

... economics and that's very encouraging for

me in that we're now getting customers that are inquiring at, "What

is the cost of graphite that I should make an assumption in my model for?

What is the CapEx number?" So we're in a very good place, I

think, from a

kind of a

market engagement perspective.

Yeah.

But it is that last 5% that is the hardest to convert.

But having KBR alongside of us, at least in the scale-up and the branding and

also that project execution delivery

expertise that they bring, is helping in a lot of these discussions.

So you're 100% right.

And this is the hardest bit. But once you've got the first one, one

of our analysts often says this is binary.

This is once you've got the first, the market will assume you've got 10 or

15.

Yep.

The market is big enough for 3,000 of these or 5,000.

That's the size of the market.

Mm-hmm.

Even if I just get 1% of that market, a

million tons per annum,

this is a multi-billion-dollar platform.

And so I don't need many plants

to get there, and I just need one big client like a POSCO or a Saudi Aramco

or someone to

take the plunge, which I'm confident they will.

Mm-hmm.

And then the market will get it.

The other interesting shift it feels in the narrative, I might be off

base with this, but it felt that a few years back, and

this is beyond Haser, this is just in general, it was more of

a ESG, more of a

decarbonization sort of angle to it.

And that's obviously still there,

but it feels like these days there's more of that strategic

geopolitical kind of dimension to it that perhaps-- I mean, the

world has changed in-

Yep

... a lot of ways.

Yep.

But is that a fair statement as well?

Is that sort of potential tailwind for you guys?

Yeah.

Look, I've been in the energy space for 30-odd years.

I spent 25 of that in the oil and gas space, and I've

always been a big believer in the importance of the gas market.

And I know this is a controversial point, but there is no energy transition

without gas. There's 30% of the world's energy

is reliant on gas. That's the energy mix.

I think it might be even higher than that.

So,

the hard truth is gas is a big part of the energy mix.

Even in Australia, I think it might be 30% or even above.

Mm-hmm.

And Australia exports the second-largest exporter of gas to the world.

So,

whether we like it or not, gas is a big part of the energy mix.

Mm-hmm.

Gas is currently used as the feedstock for the entire hydrogen

industry.

Mm-hmm.

And so what we're doing is we're plugging our tech in to displace

that tech,

that current process, with a low-emissions alternative that is on

cost parity,

and that is very important. So we're not disrupting supply chains, the same

supply chain, the same gas network, but without the carbon emissions,

and that is the big selling point for

us. So I see that the headwinds have moved towards-

Yeah

... sidewinds and tailwinds.

In particular, as you said, this energy transition piece of energy security,

the latest Middle East conflict of can we domestically

supply diesel and airline fuel and sustainable

liquids fuels and-

Mm-hmm

... ammonia and fertilizer.

Mm-hmm.

It might be a surprise to many of your listeners that you don't

refine oil and gas

without hydrogen.

Mm-hmm.

You don't make ammonia without hydrogen, you don't make methanol

without hydrogen, and you certainly don't make sustainable aviation fuel without

hydrogen, and a lot of it.

Mm-hmm.

And plastics and other things. So-

Yeah

... all of our base industries rely on hydrogen

today. That's 100 million tons of hydrogen that's currently being

produced. All of that is using that dirty process

that produces hydrogen, but 10 times the CO2.

So that's our dis-

And it's still called green hydrogen, is it?

No, it's actually called gray.

Oh, gray. Right.

It's called steam methane- reformed hydrogen.

It basically takes gas as a feedstock, and then it effectively

produces hydrogen and 10 times the CO2.

So every ton of hydrogen produced to support those industries that I've just

described-

Mm-hmm

... is associated with 10 times the CO2.

Mm-hmm.

That's 10X. So the global hydrogen

industry is 100 million tons, but it's a billion tons of

CO2.

Yeah.

And that's equivalent to two times

Australia's total CO2 emissions as a

country.

Yeah.

So that's the price.

Yeah.

Right? Now, that's the problem, but-

Yeah

... it's also the price.

Yeah.

And

that's the excitement of what we're trying to do.

And it's going to happen because we see it emerging

now.

And I suspect too, I think you said this last time,

for a long time, it was sort of

just an expectation for big clients that they would sort of, quote unquote, "do the right thing" and-

Yeah

... move towards it this way. But there's a bit more of a carrot or stick type approach, I suppose, these days, where it's sort of like you can sort of put these debates to one side and just sort of say, "Well, hey, there's legislation around a lot of this stuff," and increasingly so. So I presume that adds another sort of reason to make the switch.

That's the stick that you'd hope that governments, and they are-

Yep

... and they're starting to penalize polluters, for polluter should pay for the carbon dioxide that they emit.

Mm-hmm.

But even if they don't, I guess the point that I'm trying to get across is that we're removing the green premium-

Yeah

... because we can produce hydrogen at such a low cost-

Yeah

... that, yes, the steel makers are going, "Well, I really like the idea of green steel, but-

Mm-hmm

... are the customers really going to pay for it?" Well, we're offering a proposition that says, well, I can reduce that premium down to almost cost parity.

Mm-hmm.

And that's what's attracting POSCO, and that's what's attracting M Resources and Whyalla.

Mm-hmm.

And that's what's attracting other partnerships that we

have that are not necessarily public.

But it's the removal of the green

premium-

Mm-hmm

... and that pragmatic, practical solution that's now starting to get,

I think, momentum and traction.

Yep.

And that's the big one, Andrew. The whole green premium

thing has been important because companies

have not necessarily wanted to effectively pay for that premium.

But if you can offer a solution that they don't need to, then all of a sudden

you're in a different category. That's our differentiator.

Yeah. That's huge. The other thing you mentioned

before, and I mentioned it in the intro, but it's probably worth just

underlining a little bit here, is because one of the other great challenges of

sort of getting to this commercialization phase, which is always very exciting, but

then the investors go, "Well, wait a second, do you need some more cash?" And by

the way, let me just stress that I don't think anyone of us would care if that were

the case. We're more concerned on the return on that cash rather than-

Yeah

... whether there is a cash. And it's sort of something the market often

misunderstands.

Yep.

But it is worth just digging into the

model that you've got here because of the partnership with KBR, which is a

huge organization.

Yep.

That makes you guys a much more leaner

outfit from a capital standpoint.

Yep. We're capital light, as I like to say.

We've only got, I think it's maybe 13 or 14

engineers in the firm. So we're light touch in

terms of resourcing and cost, and you see that coming through every quarter.

Yep.

Our cash burn, it's quite low.

Yep.

And that's the upside, because

through KBR, they're global experts in licensing technologies.

That's why we brought them on board.

Mm-hmm.

It is only exclusive in ammonia and methanol.

They are helping us on the broader scale-up package and so forth, so it's a bigger

thing-

Mm

... as well. And that's where the real returns are.

So we've invested $140 million in

developing the technology over the life of the company.

Mm.

That's the capital deployed in developing the tech. It's a lot.

And I like to think that that is most of the

capital that we've had to deploy now puts us in a position to

accelerate

free cash flow as we go into projects without the big capital

deployment

that's required. So that is a very unique model.

And I think it's one that we hope has attraction

for shareholders, that they see, okay, you don't need $500 million

to build these things.

Yeah.

You're dealing with hopefully a license model because your tech's

mostly de-risked.

You say free cash flow, but I suspect

you

could deploy

that with great effect. In other words-

Yeah

... what I'm trying to say is there's a discretionary element to it.

So, fantastic, we've made it through the other end, cash is

coming through.

But at this stage, with the opportunity in front of you,

the idea must be, "Well, not really cash.

We're going to reinvest, we're going to plow this back in because we can put a

dollar in and get $X out of it."

Tell me if I'm wrong on that, but if I am right on that, where would you be

allocating this capital as it sort of came through to sort of

help multiply and accelerate things?

Yeah.

Or do you feel like you've got the cost base there that you-

Or you return it, right, to shareholders.

Yeah. Right.

So there's multiple options-

Yep

... for us. It's a great problem to have.

That's the-

Yes

... first thing I'll say.

Yes.

That once the money's flowing, we've got multiple options

for it. This is a very diverse business.

We have a very strong technology that,

under a license model, it's a multi-billion-dollar

platform. Under a build, own, and operate model, it's a $10 billion

platform because these are very valuable technologies and

processes. So I think we have optionality.

Yep.

My immediate sort of reaction to all that is we just got to

accelerate market share-

Yep

... and get out in front of everybody.

And we're starting to do that in what I'd call the go-to-market strategy.

We've just got to keep pushing hard to grow

market share with big clients and customers.

That's why we brought KBR on board, because it's difficult for a small firm like

ours with 15 people to sort of do all that.

Yep.

And they've licensed technologies 80 times, so they know what they're doing.

Yep.

And they bring that engineering and that project delivery and that guarantee of

process and so forth that we can't stand behind.

So I think it's a good combination.

And I think we would just use it to accelerate the business where we can in terms

of-

Yeah

... just multiple project. I'd like to think we have an FID every year once we get

into steady state-

Yep

... for projects. And that is queuing up, right?

But I said the biggest risk for us at the moment is not

technology risk, it's more just trying to keep some of these projects on the

same timelines, because we're dealing with big multinational corporations.

Yep.

But like I say, that business has strengthened and the engagements have

strengthened. The opportunities have become projects,

and once they become projects, you start talking about cost and

schedule and

timelines and so forth. So it just gets serious.

And

it's trying to strike the balance, right?

Because we engineers love, and we love them to death, by the way.

They do love to-

But

... work things. And I've always constantly said perfection's the evil of

good.

Yeah.

And so we've just got to continue to sort of strike the balance and

keep winning contracts.

Yes. Yep. No. Oh gosh, there's a lot I could say. Yes.

Yes. So true.

It was all positive, right?

Yes. Yeah. No.

I come from that world myself, but-

Yeah

... I do realize that we're running an agile business.

Yeah. Look, 100%.

Try and strike the balance.

I often say engineers are just really the wizards of the real world.

Yeah.

I think they're just incredible what they can do.

So I'm-

100%

... not throwing shade in any way, shape, or form.

But there is a commercial reality to certain things as well.

So sometimes-

We're running a business

... you've got to-- Yeah.

Our guys, fortunately, our team get all that.

Yeah.

And they get the importance of all that.

And we try to de-risk along the way, and we just look at certain things.

But we're in a really good place. Part of this is a mindset

Yeah

The people that you have working for you have got to see

both the technical and the commercial side of your business.

Yeah.

Otherwise, it gets really hard, and that's where you got to pick the right people-

Yeah

... and you've got to instill the right culture and mindset into the business to

ensure that people feel like they can take risk

in a measured way and still

provide a robust

process to a customer.

I always used to think stuff like that was just corporate speak, but as
the older and more mature I get, Glenn, the more I think, like, no, it
is culture.
It's fuzzy, it's hard to put your finger
on, it definitely doesn't fit into a spreadsheet, but I'm just more and
more convinced that everything you said there is 100% true
because if you don't have that
culture part right, then it's super hard.
Speaking of alignment and commercial realities and all of that,
and given that it's such a small team, now there's certain disclosures that are
legal and that shareholders will know about, and I don't want you
to dox anyone of course, but within that very small team,
are there things like, not necessarily an employee share plan, but more of a,
are most of these engineers shareholders?
Do they have skin in the game, I suppose?
Very good question. I do think that's at the core of what I'd call owner's
mindset.
In a company like ours, you need everybody to feel like they're an owner of the
company because that-
Yeah
... then drives a particular behavior-
Yep
... in terms of how they work and think and
strategize.
Yes, the short answer's yes.
From board all the way down to
our assistants in the company and the secretaries-
Yep

... they all have stock.

Great.

And that's the way that I think the model works, because then

everybody's aligned with the outcomes of the business.

We have a short-term incentive program that is

stock-based,

and focused on delivering key performance indicators around

tech and commercial outcomes and TSR.

Yep.

And then we have a long-term plan, which is more retention-based.

Mm.

But that's a stock plan that is

mostly related to absolute share price performance, which I think is an

important measure. But it is changing, and that is

becoming, in industry, more strategic-based as well

as share price performance, and it depends.

Mm.

But everybody is what I'd call tied to the totem pole

in H esa, in particular myself and the management team as well as the board,

and that drives the business.

Yep.

I wouldn't have it any other way,

and I think employees actually

appreciate it. They like it because they feel like they're owners of the business

and-

Yep

... and that keeps them

hungry.

Probably worth reminding them of the,

what was it? It was SpaceX just on the weekend.

Yeah.

I think Elon made, I think it was 400 or 4,000 millionaires

with the IPO and it was-

That's amazing

... engineers and all levels of the company

that for years and years and years got, well, got paid obviously in cash, but got

stock as well.

Yeah.

And it was sort of like-

Amazing

...

those events just remind you, it's like, oh, yeah.

I've worked for a lot of companies before, and you sort of get some shares and it's

very easy if you're not in our world, where it's kind of like-

Yep

... "Oh, yeah, what's this thing?" or, "How do I sell it?"

Yeah.

"I see a wiggly line on a chart."

But then those kinds of events to me, it's just sort of like, no, this is what it's

all about, right?

Well, it reinforces it, and everyone that wants to join or is with H

esa

is not in the company for just salary.

They want to be part of-

Yeah

... growing something,

but also doing... I like to refer to H esa as a double bottom line

company.

On one hand, we are absolutely about creating value for

shareholders, but on the other hand, we can do it

whilst having an impact somehow.

Yeah.

And it's that impact side of things that a lot of our engineers have joined

for.

Yeah.

Many of them

have spent 20 years destroying the planet,

and now want to fix it. And so it's interesting

when you have dialogue with some of our,

or discussions with people that want to join the company of, "Why do you want to

join H esa?" "Well, because I want to do good things for the planet."

Right.

And that's one of our, what I'd call employee value propositions,

that we're about creating value, but we're

also about doing things right.

Yeah.

And that's why a lot of people work at the company.

A few years ago, we had this sort of potential customer that just

decided, "Oh, well, we're not going to pursue H esa."

This is going back several years. And one of my guys come up to me and

said, "Why would they do that?" It's like that's just a backwards

step. They wanted to go back and do oil and gas, and it was-

Mm

... probably quite a big company.

Yeah.

And it was like, why would they... It was like they actually couldn't understand

why the company would be doing that.

So it's kind of the mindset that we've got with people.

Yeah.

So yeah, it's kind of cool.

Yeah. It's cool and it's,

not to overegg the pudding, but it's an advantage, right?

Like the market for talent, good quality talent, is real.

Yep. Especially the young guys, Andrew.

Yeah.

I mean, we're talking about guys that are in their 20s and 30s.

Yep.

They do have a completely different mindset.

Yep.

And so they are looking for a job that

delivers multiple facets. When they go to a party on the

weekend, they want to be able to say that I'm doing actually really cool things

with the technology that's solving a world problem.

Yeah

And they have that ability to say that with Hazar.

So it's definitely changed, generational change as well.

Yeah. That's super cool. What I'm going to do is because I

just

meander off on all kinds of tangents, Glenn- ...

because you keep saying interesting things.

So what I'm going to do is I'm just going to go through some Q&A here-

Sure

... that we've got, and that way I don't risk leaving any

questions unanswered.

Yeah, sure.

So I'm just going to go top to bottom, everyone.

Remember, you can vote on things if there's something that you feel is more pertinent.

Mm-hmm.

One from Cleo here. So is there a view, doesn't matter how vague, as to when profitability might be achieved?

Are we talking one to three years or plus?

Not as a guidance and not as an official guarantee-

Yeah

... but do you have a sense of when you pass that break-even point?

Yeah.

For me, it's the first step is self-funding, where you

get yourself to a place where your revenues is

funding your cost, which I think is a really important point.

It's not necessarily profitability-

Yep

... but relying less on the capital markets for growing your

business. And I'd like to think that's only a few years away.

We did a capital raise about a year ago

that was very successful with some big players.

Mm.

I wouldn't say that's our last,

because that'd be risky as a CEO, but at the same time, I would say that we're in a very good place from a funding perspective.

Any number of the things that we've got in front of us could re-rate this company.

Yeah.

And we've got now revenue coming through the door.

So our focus is on

covering our costs and becoming a sustainable business.

Mm.

And

we're relying absolutely less on capital markets these days.

The first year that I was with the company, we had to do two capital

raises for the CDP to get it up and running and-

Yeah

... and prove that the tech was working at large capital scales, and then we did

one more, and now the gap between these capital raises

is growing because we're not spending much-

Yeah

... and we're getting

revenue coming through the door, so that's offsetting a lot of our operating costs.

Yeah.

And we've also got non-dilutive funding still coming through, and we've got more

in the pipeline through government funds and R&D.

And actually, when you look at our cost base,

we're spending significantly under a million dollars a month.

Mm.

So every quarter, we're around $2 million, maybe even less on some

quarters.

Mm.

And when you've got that sort of capital cash balance of sort of $15 million, you

can see that you stretch it out, right?

Yeah.

And all of our business is discretionary as well.

So I think the answer is look, that's the

absolute goal-

Yeah

... for our business, and we're stretching it as far as we can.

But I like to think that if we do need to fund in the future, you're funding into growth.

Yeah.

You're funding a business that is actually going to be growing and growing and growing, and so that you should...

Hopefully, investors will see that as an opportunity to own a larger proportion of the firm and go from there.

The investor base that's coming into us now is very different.

Three or four years ago, we had almost no institutional investors. Now we've got probably 20% to 25% of our investor base is institutional, strategic, and that will grow.

Yeah.

And I know that will grow, for certain.

So it's changing shape quickly,

and that means that we're maturing as a business.

And most of those investors are looking for triggers like revenue-

Yep

... multiple revenue contracts, and that's what we're trying to deliver.

Just don't forget us little guys when you're big and successful, Glenn.

I'll keep a few of your shares, Andrew.

We were here first.

Again, as an observation, it is fascinating to watch a company go through that transition, the various life stages, and then you start getting noticed by the bigger end of town.

And to your point, it can change

pretty rapidly, and it can feel like forever, but
I think it's more of an
S-curve pattern than any kind of linear kind of chart.
It's like nothing, nothing, nothing, everything, and then flattening out again.
It's a very interesting thing.
Yeah. 100%.
Another one from Cleo. To Glenn's mind, which of the current evaluations,
developments, or partnerships, be it Fortis, KBR, Mesh, et cetera,
is likely to generate licensing revenues first?
And at this point in time, which industrial use, be it steel making,
renewables, fuels, ammonia, construction materials, et cetera, has the most
long-term potential? So sort of two-part question to that.
Yeah, very good. Let me take the second bit first.
Yep.
Because I do think I should mention that steel making is probably where our
technology fits the best.
Right.
If you think about steel, just so everybody
understands, steel is responsible for almost 10% of global
emissions, so it's a
massive industry with a massive problem-
Mm
... that needs a solution.
Hazar actually has the three important components
of
steel making. We produce hydrogen for direct reduction of iron, which is a
low-emissions process that's really getting traction,
and you see that's Whyalla and others.

Mm.

So we produce hydrogen low cost. We produce a carbon product

that also is used in steel making. So you don't make carbon steel

without carbon.

And so carbon is used in at least seven places in the steel-making

process. Importantly, it's used as a recarburizer in the electric arc furnace,

and we've done one or two offtake agreements in that space.

So the hydrogen, we've got the carbon, and we use an iron ore catalyst.

So if you think about steel making, we have the three corner points in

iron ore,

in hydrogen, and carbon that fits perfectly into the

next phase of green steel-

Mm

... which is why we're getting so much interest in the tech.

So I really like steel as a sector And

I do think that's going to be a very early adopter of Haser's

technology.

Mm.

Alongside of that, ammonia. Our alliance with KBR is

all about ammonia and methanol. KBR are the world's largest

licensor of ammonia technology. They own over 50% of the world's ammonia

market-

Mm

... from a technology perspective.

So we have line of sight to something in the order of

250 ammonia facilities

there that need a solution, plus new growth.

Mm.

So steel, ammonia.

Refining's a little bit slower,

just because it's a very established business and-

Mm

... there's less of it these days. I do think in terms of new markets,

liquid fuels. Low carbon liquid fuels are

really getting hot, in particular SAF,

and some of them are very hydrogen-intensive,

so we're seeing a lot of interest there.

And then just generally, utilities are starting to see the benefit

of hydrogen in power generation as well.

So-

Mm

... I see those four key segments

as two traditional ones in partly

steel, but also ammonia and methanol.

But in new markets,

liquid fuels, low carbon liquid fuels, and also power generation I think are going

to be really hot markets.

On projects-

Before you get to the projects one-

Yeah

... the pace of change is so fast in this space.

Yeah.

But is there a

battery component with graphite?

Yeah. I should have mentioned graphite.

So we've qualified our graphite now in concrete, asphalt, and bitumen-

Mm

... which is amazing. Boral did that for us, so that's fully qualified.

That meets Australian and international standards for an additive into that.

They're drop-in markets. Today, we can basically drop our graphite

into concrete, asphalt, and bitumen.

Mm.

Last week, on Friday, we signed a deal with Hallett Group in South Australia,

at least South Australia's largest

supplier of building and construction materials, and that's-

Mm

... for using Haser graphite in green cement, so that's

pretty cool.

Yep.

So that's definitely an emerging space.

Steel-making, of course, is a built-in offtake, as we've talked about.

And then down the road a bit,

thermal energy storage, which is getting a lot of momentum.

Mm.

Batteries, high-end applications like anodes,

and electrodes, and other sort of

high-end applications are definitely mid to long-term.

So I like to think in the next one to three years, we're focused

on large volume markets, high confidence, like asphalt,

bitumen, concrete, and steel.

Mm.

And then as we go three to five years and beyond, it's all

about thermal energy storage, it's all about high-end applications, and potentially

batteries. We have a process to purify Haser graphite to battery level,

99.9, so we've got all that at our disposal as well.

Right.

It's not a big market.

Right.

Yes, it's $10,000 a ton-

Yeah

... but it's a two million ton per annum market, whereas steel

and say, for example, I think at least the concrete

industry is sort of edging towards half a or 500

million ton per annum market and beyond.

Okay.

So they're big markets that need big solutions that today

might be $500 a ton.

Yeah.

I'll take it.

Yeah.

And I will continuously explore the other markets.

So graphite's getting hot, and the big dynamic there

is the supply side is dominated by China.

China. Yeah.

There is no supply domestically in any of the developed nations, which is why the

governments are running around trying to find supply.

Yeah.

On projects,

any number of projects. Fortescue's and the Mesh project in the

UK are probably the more advanced.

Mm.

But we're starting to see now POSCO moving forward with the way

they think about it with the integration of steel.

WYAL is a wild card that comes before the end of the year.

Mm.

I think we're very well-positioned there with EM Resources,

and the government there to deploy Haser technology.

And we have several other projects in the pipeline that could

also jump the queue.

As I've said, a lot of the interest has been with serious players that

want a near-term solution. So whilst I can't be public about them,

the geographies include the Middle East,

where we've got lots of gas,

low-cost gas and big players that need ammonia, and SAF,

and other solutions.

Steel in Asia, Pacific, and Australia,

strangely enough, and also

North America continues to be interesting,

as well as parts of Europe. So, whilst I can't be public about the projects

that could jump the queue, they are mostly what I would call Fortune

300 companies-

Mm

... that are

getting serious about

decarbonizing.

Yeah. Interesting.

One from Tom. "Well done so far," he says.

"Can you talk to the standard timelines in terms

of revenue stages for a project?" That is time from

sign to peak revenue. What's sort of the-

Yeah

... the length of time?

Yeah. Different for each one.

It'd be different for each project, I suppose.

Yeah. No, and we've tried to break this down, but think of it like this. The first stage of a particular engagement is already revenue-generating. We move into a feasibility study pretty quickly.

Mm-hmm.

We've got such a fairly queue of projects, we can't manage them, and we try to prioritize the ones that we see visibility towards a project.

Yeah.

We work a lot with KBR in terms of high-grading opportunities.

Mm.

They've got a big pipeline. We've got a pipeline.

We sort of talk about that once a week to high-grade them.

Initially, we'll enter into some sort of an engineering service agreement and a feasibility study that could be anywhere between one and three million dollars, depending on the scale of the project. So that's immediate revenue.

We see that with Canada-

Mm

... and also EPP now. So they're two revenue-generating earlier stage things.

And then as you go into FEED, that becomes, generally depending on the size, a three to five million dollar contract.

Mm.

And then the company is capable of taking an FID, a final investment decision.

Mm.

And then you start to receive license

fees.

Mm-hmm.

So they're the two main phases of the work.

It's the pre-FID phase, which is studies and

FEED, and then into licenses.

Canada's a great example. We've been now working through feasibility

and then FEED, and then there's an FID on the

horizon there. And once that ticks over, it become a

fairly substantive project.

Mm.

And that's what we're working towards. EPP's got a lot of traction quickly.

Mm.

That's the one in the UK.

Mm.

That's moving quickly because it's got strong government support behind it, and the

government there is very keen on methane pyrolysis, and they're doing great things

on the West Coast there in terms of getting licenses and so forth.

So that's getting early traction.

So I've always said if we can get one or two of these every year,

then we start to build the pipeline of proper revenue generation.

It only takes five or six of these then, back to Claire's point, of covering the

cost of the firm.

Yeah.

And that's the target for where we've got to get to.

Yeah. And you just have a big bank of recurring revenue, I guess, going

forward.

Yeah. Revenue multiplying is kind of the term that I like to use, as you said.

Yeah.

Just sort of trying to stack all these up until you get to steady state.

That's the goal.

That's so interesting. Couple more from Tom.

What graphite cost recovery price is assumed in Haser's cost per kilo of hydrogen?

Yeah, it's a good question. Depends.

Sometimes we put zero in.

Yep.

Other times, depend on the market. It's project dependent.

In our base economics, I think we use somewhere between three and $500 a ton.

Mm-hmm.

The justification for that is that we have a signed offtake agreement with a steel maker in Western Australia at $400 a ton. So we have market validation of pricing and price discovery.

Yep.

And that's typically-- Look, it's at the lower end-

Yep

... Andrew, but we're partly conservative when it comes to economics.

Yep.

There's always upside.

If you're going to be wrong, be wrong-

Yeah. Be wrong to the low-

Yeah

... yeah, exactly. Be wrong to the low side.

Yeah.

And so we've sort of tried to take a conservative approach to all that, and that

is, I think, helpful in terms of the economics and

justifying the cost base for us. But in the US, when you've got gas

prices of three to $4, we can deliver hydrogen-

Oh, yeah

... with a small amount of graphite pricing for around a dollar a

kilogram. In Australia, where gas prices are elevated, sort

of $10 to $13 a kilogram, an MMBtu,

that's what gas prices are. We could be anywhere around

$1.75 to $2.30, so still very competitive-

Mm

... cost for hydrogen.

Yeah.

The driver for all that is the gas price, really.

Yep.

And then graphite will be depending on the market.

But yes, we take some credit for it, but we take no credit for carbon offset.

Yeah.

Which I think is a real-

Yeah

... value, where you're saving a particular client

value because they're not having to pay carbon costs.

A bit like a franking credit.

Yeah. So we don't take both. We just take one,

and we think that's a fair assumption to make for the economics.

Yeah. There was a second part to that one.

It says: Will success for Haser drive this price down in time, maybe a long

time, or do you expect the expanded utility of graphite to maintain

demand?

Yeah. Good question. Look, I think we're going to benefit certainly from economies

of scale, and we're absolutely going to see that.

We don't cook any of that into our assumptions at the moment, nor do we put any subsidies and other things in there.

Yep.

So I see downward pressure on cost for sure.

And I think as the graphite market evolves, and it will,

as you've identified, we go into higher grade graphites, we're going to see higher prices

for that. So we're at 400 for now. That's fair because we've got

a contract at that level.

Yep.

But we see demand sometimes pushing it as high as $1,000 a

ton. In thermal energy storage, they're securing graphite

from India and China for

two or $3,000 a ton.

Hmm.

So there's a price marker out there for sort of mid-range

applications. So we look at all the pricing scenarios,

and it depends. But I think we'll win on some and

lose on others. But I think

in general, I think we're

conviction on the graphite markets.

We have a local graphite product that doesn't need to be

shipped. It's produced at site-

Yeah

... next to a firm where it can be used in concrete, asphalt, bitumen, steel-

Yeah

... and other applications, and the world's hungry for graphite.

Yeah. That's super interesting.

KBR has freed Haser from its small company capacity to scale

and go to market.

The question is, though, what is KBR's scaling capacity limit currently

in terms of the projects that could be run concurrently?

So I guess, what's the blue sky with KBR, I guess?

Well, they're one of the world's largest.

These guys have got

thousands of people around the world.

Right.

And so they're capable of scaling big tech.

Yep.

That's one of the real advantages of what we bring,

and we brought them on board to help us accelerate the scale-up and the

commercial deployment.

Mm.

Look, I think they could handle several projects a year.

Yeah.

That's their capability, and that's what they've shown.

They're involved in big projects like Orcas and Pluto and-

Yep

...

and other big projects worldwide. They've got a massive defense business.

30 or 40,000 people worldwide.

We're connected all the way to the top, which is great.

I just met one of their main management team

members here. And so we've got, I think, a

really good partner in- And KBR, they bring

project execution capability, they bring project delivery

capability, they bring scale-up capability,

and that's what we need to capture market share.

Mm.

And that's why I think they can handle several big projects.

They're well-equipped to do that. Not Hesa standalone. We can't do that.

Sure.

And that's why this has been very important. They're plugged into Fortis in Canada.

Right.

They're plugged into our project in the UK.

Mm.

They're

very strongly across what we're trying to do in Whyalla.

Mm-hmm.

So they bring a strong

brand to bear

when we're fronting with prospective clients and customers, and I think

that's going to benefit both of us.

I don't know if this is a risk. I would probably frame it as a

negative-

Yeah

... only because I've been burnt before, Glen, and what's happened is I

found a company I thought was really great,

and they got taken out

at a massive premium to market price, right?

And

so there are worse problems to have, except if

you are of that view as a shareholder as like, there's great potential

here. Sometimes the market just takes the easy money.

Up 20% premium to last traded price, we're done.
Whereas the more farsighted investors might go, "Well, maybe we're
leaving a lot on the table here." And I
see a company that's
really at the cusp of things here, and
you said yourself, there's $150 million invested in the tech.
They could take out 51% for a fraction of that.
I'm assuming KBR or someone like that who really knows the stuff and knows the
opportunity, right? You're not having to convince a mom and dad investor as to
what's going on in these
big industrial power games. And it's really a question for the board, and
it's a bit of a cheeky one, and I know you can't really answer it,
but
I guess you'd be reluctant to--
Never say never. It depends on the counterparty and the price for-
No, I get the question a lot, Andrew, so I'm well aware of it, and I'm well
aware of the fact that our market cap is
edging towards half of what we invested in the tech,
right? That's how inefficient markets are.
They're not even giving us credit for what we've invested.
Yeah.
And I think one of our analysts says, "Well, you're only getting credit for one
project right now." And I partly get that, right?
Yeah.
Investors want to see
projects move along, and we'll continue to demonstrate that.
And look, a takeover is a risk. I think it's an
infrastructure play-
Yeah

... because this is big, hard tech, and it reminds me of the LNG

business 30 years ago-

Mm

... where a lot of small players got involved, and it all became a big boys game.

Mm.

And we're starting to see a bit of that.

Mm.

We've got a very clear competitive advantage, 100%.

Yeah.

Yeah. In cost, in emissions, in scale, in

market share.

Yeah.

And

we are in the sights, I know, in the sights of some big players because

they do see the value of what we do.

And our next best competitor is

those that are producing gray hydrogen-

Yeah

... that want a cleaner alternative.

So it is a risk. I'd be disappointed

if it was at these valuations.

Yeah.

What's-

You can always tell them to go fly a kite, though, I suppose.

Yeah. But at the end of the day, I think from a shareholder perspective,

it's

my role to ensure we get the greatest value for the

shareholders. How we do that is we continue to develop and deliver the

underlying business. Hopefully, the share price follows.

We do it as fast as we can, so we minimize that risk,

and then ultimately, if it becomes a $3 billion takeover target, then hopefully

everybody wins.

Yeah.

Not a great winner-

Worst problems to have. Yeah.

Yeah. But I'm very conscious of that, and I do think it is a risk, which is why we

try to move fast, try to keep the

shareholders informed about what we're doing, and keep delivering the underlying

business. It's fundamentally important, but it is a

risk that we talk about at the board level.

Mm-hmm.

But delivering the business, I think, helps.

Yeah.

With that.

Oh, it just does. It's

just that boring Warren Buffett-esque kind of stuff.

That just get the business right, share price will follow.

It always does.

Yes.

Find me one example in the capital markets in the last 100 years where a

company's profit per share went to the moon and the share price didn't.

It just-

No. Well, that's the case

... doesn't happen, right?

No. I ran a company several years ago, Sonic Gas and

Energy, which was taken over, and it was the same discussion with

shareholders, right?

Yeah.

Is this a fair price-

Yep

... for the firm? And so, yeah, it's always a risk-

Yeah

... being a public company.

Yeah.

But we'll do our best to get the right price if that's the case for shareholders.

Yeah. That's all you can do.

Yep.

Hey, I better let you go, but my favorite question to

always end on is, what didn't I ask you, Glen, that I probably should've?

You

get these same, and thank you for your patience, these

questions again and again and again, but what don't people ask you that you

think they should probably ask you?

Well,

look, I would probably just say

that

I get all the normal questions about graphite and scale and KBR and all those

things.

Mm-hmm.

I just think this is something that is really worth getting on your

watchlist-

Mm

... is what I would say.

Because I do see there's deep underlying value here.

You've got all the ingredients for success.

You've got a very big market that needs a solution that is not there that
we can disrupt. We've got a scalable tech that we know
gets very big because the proprietary aspects of our
tech are better than everybody else's because we use fluid bed
reactors and catalysts that nobody else can get access to.
Mm.
We have strong partnerships now. In particular, I keep calling out KBR, but
they help us get to scale
And we've got, I think, a robust funding position that
gets us through some substantial catalysts in the near term.
So I feel like we're in a really good position.
I'm never comfortable,
because you always look at the share price and go, "Well, that's not where it needs
to be." And I'm the first one to say that.
But we'll just, as I've said, continue to deliver the underlying business
and I think it will all follow. But I think it's
worth saying that this is a
deeply undervalued thing that has got great
potential. And I know every project that we do is
probably worth between $50 and $70 million.
Mm.
That's the
value of the technology for one project in our economic model.
Mm.
And so if you just put five of those in.
Mm.
Well, say our vision's 10 and 10.
Mm.
Yeah?

Mm.

I think the pipeline supports that because I've-

Mm

... tied it. Our pipeline, we're public about the fact that there's 50 odd

potential customers.

Mm.

So, okay,

I don't believe you, Glenn. I think I'm going to discount you on 50.

I'm going to say 10.

Mm.

I think 10 and 10's a real opportunity for us.

And then you might say, "Well, okay, that's $700 million

market cap."

Mm.

"Glenn, I still don't believe you.

I'm going to discount that

and cut it in half for fun." I'm still a 400 to $400

million company. So whichever way we cut it, it's got to be

more than 80 to $90 million market cap.

And that's multiples of where we got to be.

So, I think the value is there, the underlying value there, and all the

building blocks are coming into place.

So I would definitely get it on the watchlist and

keep an eye on it.

It's always nice to end on a bullish sentiment.

And-

... another

broken record thing for me is asymmetry, and it sounds like

there's a bit of asymmetry there. So that's

super interesting.

Hey, maybe we'll do it again in another six months-

Well, let's do it-

... if you're up for it

... let's do the barometer test in six months and see how far we've got.

Nice. Deal. Lock it in.

All right. Good stuff, Andrew. Well, thanks again for having us.

Always a pleasure, Glenn. Appreciate it, and keep up the great work. Thank you.

Cheers. Thanks everybody.

Cheers.

Bye then.