OTC Markets
Today we're excited to spotlight a pioneering force in the global renewable energy landscape, Carnegie Clean Energy, which trades on the OTCQB venture market under the symbol CWGYF. Based in Western Australia, Carnegie's at the forefront of wave energy technology through its world-leading CETO platform, which harnesses the immense and consistent power of ocean waves to deliver clean, predictable electricity. Joining us is the company's CEO, Jonathan Fievez, a leader with a sharp focus on innovation, commercialization, and global collaboration. In this conversation, we'll explore Carnegie's journey, the challenges and breakthroughs in ocean energy, and what the future holds for marine renewables. Whether you're an investor, an engineer, or just passionate about the shift to cleaner, more sustainable power, you'll want to hear what's next for this cutting-edge company. Let's dive in.

OTC Markets
Jonathan, thanks for joining us today.

Jonathan Fievez
Yeah, great to be here. Thanks.

OTC Markets
So, can you provide a brief introduction to Carnegie Clean Energy and your core mission?

Jonathan Fievez
Yeah. So, Carnegie stated mission is to harness ocean energy to make the world more sustainable. And, and you know, while we're certainly dedicated that positive outcome for humanity, we're, we're certainly a for-profit company. And, and, you know, I believe that a profitable business can scale faster and, therefore deliver the twin benefits of you financial and environmental returns to investors.

OTC Markets
Nice. So, what problem is Carnegie solving and why is wave energy so important to the global clean energy mix?

Jonathan Fievez
Wave Energy is really unique. It's a unique resource that is more consistent, more predictable when compared to other renewables like wind and solar. And that's

why it makes it a really essential addition to the mix. So, if you take good wave energy sites, you know, open ocean wave sites, that wave energy is present around the clock. So, we can generate electricity from that wave energy, you know, through the night and when there's no wind. You know, if you think of, you know, you may have seen surfing competitions on the TV and, you know, what you're looking for there is good big waves, but no wind. And so, yeah, that's a really unique characteristic of waves is they're present when other renewables aren't necessarily there. And of course, you know, people want to, they want to you know, have hot showers and cook their dinners, you know, at all times of the day. And so, yeah, that's the special thing about wave energy. And, you know, Carnegie's technology is all about converting those ocean waves into electricity. And there's, I mean, there's just so much wave energy out there, you know, it's multiples of the consumption of countries. So, for instance, in Australia, where Carnegie originates from, you know, the amount of wave energy hitting Australian shores is like 10 times what the country consumes. And, you know, that'd be that'd be true for the US as well, that the amount of wave energy hitting, particularly the West Coast, would be a multiple of how much is consumed.

OTC Markets
So, Carnegie's CETO technology has garnered international attention. Can you explain how it works and what makes it unique?

Jonathan Fievez
Yeah, so we call our core technology CETO and it's not an acronym. It's actually the name of a Greek sea goddess. And it consists of a buoy or a buoy, as you might call it, sitting just below the surface that's pulled in an orbital fashion by the forces in the wave. So, mean, when humans go surfing, know, we're surfing on the top of the wave on board. We're catching these waves. But if you watch a dolphin surf, for instance, it surfs the waves in the wave, just below the surface. So, it may not be totally obvious, but the wave forces within the wave are just like the wave forces on the wave. So, we surf like dolphins, um or CETO surfs like dolphins under the water. And as I say, it's a buoy. that sits there, it moves around in an orbital fashion with the forces of the waves. And we connect essentially winches from within the buoy to the seabed, and as those winches extend, because the buoy is going up, for instance, they resist the motion of that of the buoy going up. And in doing so, they generate electricity from generators. And in much the same way as when an electric vehicle is going down a hill and resisting the speed of, you know, so avoiding accelerating going down the hill, it's you know, it's staying at the same speed. It's regenerating that energy and putting it back in the battery.

So in the same way our technology resists the motion that's forced upon it by the waves, we generate electricity from that. And, you know, that's, I guess that the fact that we're fully submerged is a really unique aspect of our technology compared to others in the wave energy space. And it has two benefits, you know, where We're certainly safer from storms because we can dive down deeper. um We call it dive to survive and we and we can regulate the forces. So down below deep, and the forces of the waves are much lower. And so, as we dive down, we can regulate those forces. A bit like putting a smaller sail up when you go sailing in a boat. You know, if it's a very windy day, you can get the same forces with a small sail. So, yeah, we can dive down deeper and that's a unique feature. But also, ah you know, you can't see our technology from shore. And, you know, that's a really massive game changer for renewable energy technology because so many renewables are resisted by people because of the visual amenity impact. And I know in the US, you know, there's been and concerns about the impact of seeing offshore wind farms um near the shore. And, you know, I totally understand that. As a someone who loves the ocean, it's great to see that at vast ocean. But if you look out on a CETO wave energy facility that may even be only a few miles from shore, you won't see it, it's it's under the surface. So, we can generate energy and be close to shore, close to where the consuming is, but not impact that visual amenity.

OTC Markets
Nice. So what stage is commercialization? CETO currently in and what are the next steps to bring it to market?

Jonathan Fievez
Yeah, so we're currently building what you might call a mid-scale demonstration machine in Spain. So, this is a buoy that's 25 feet in diameter and it's being deployed, and we're targeting this year, it's being deployed in sort of northern Spain. And the key thing about this is that its deployment will unlock the first arrays and sort of sort megawatt scale devices. The one being deployed in Spain is a few hundred kilowatts, but I guess the commercial scale is kind of megawatt scale. I mean, for people to understand that, you know, might be the scale of 200, you know, in terms of capacity anyway, electrical capacity, it might be like 200 home solar systems in one device. So that's the scale of the device that we're targeting from a commercial level. And this deployment in Spain that's coming up, you will unlock that sort of megawatt scale deployment in the future and arrays of these devices. Essentially, you know, the most economical sort of format is to

deploy large arrays of hundreds of these devices in a farm, let's say. And um as we've seen in other energy developments, in um you know particularly in wind, once you see arrays start being built, you know the scale and the costs change dramatically. So, you know you as we accelerate up in scale, the supply chain kicks in. And we get you know that those economies of scale and the costs plummet and that then drives more and more uptake. So yeah, there's this really um important sort of transition in the process. And once you start that process of scaling up, costs come down and that drives even more scale.

OTC Markets
So, AI is a popular and growing development space. How does artificial intelligence integrate with your wave energy projects?

Jonathan Fievez
Yeah, I mean, AI has certainly become buzzword in the last couple of years, last year in particular, but we've been using it for a lot longer than that. We've developed our own wave prediction technology because it's really yeah important to the power production if you know what's coming. But yeah, AI for us is one of the coolest kind of developments, but you know a really significant one as well from a kind of a performance perspective. So, we're trying to drop the cost of energy and that's the impact basically the to make the system work. And so, if you can increase the amount of energy produced, you can drop that cost of energy proportionally, and that's where AI really kicks in. As I explained before, we used to have-- sorry, we currently have three connections to the seabed and effectively these three power takeoffs or winches as I described them. We used to have only one of those and that meant that we couldn't really control the position that well. But now with the three, we have a very kind of precise control where we can resist the motion in such a way that the buoy is positioned precisely in the wave. But the algorithms to, I guess, optimize the amount of power production by controlling that position are really difficult to write. You know, as we went from one connection to seabed to three, it became very, very difficult because of the complexity of waves. And I guess from the mathematical side, it's the non-linearity of waves. But AI can make sense of it. I mean, that's the really game-changing aspect of AI is that it can do things that traditional approaches can't do. And so, we've been collaborating with Hewlett Packard Enterprise for about six years. We have a collaboration agreement with them and their gurus of AI have been looking at our problem, working with our hydrodynamic experts and combining that knowledge and understanding and using their supercomputing capabilities to develop what we call the reinforcement learning controller. And what's amazing about this is that as the name suggests, it learns. So, we deploy our CETO wave energy technology with a

reinforcement learning controller. And on day one, you know, it's a competent, but it's not a fully optimized wave energy converter. But over time it learns. And then it learns from the other devices in the array. And so, you know, you get this amazing improvement over time of performance. It's kind of like having a pro surfer on board in the buoy, knowing exactly how to extract the most energy from every wave. And then keeps learning through its whole, you know, 25, 30 year life of operations.

OTC Markets
So, in previous in our conversation, you had mentioned Spain. What are the current or upcoming projects you'd like to highlight?

Jonathan Fievez
Yeah, so that's a major game changer for our company. You know, this is the first demonstration in Europe of our sort enhanced CETO technology. It'll have the AI control on board. That's being deployed in the northern part of Spain, actually in the Basque country in Spain near the corner of Spain and France you know in an area that's well known for its fantastic way of energy and surfing as well. We call that our Achieve Project and we're in construction of that at the moment. We're receiving components of that system at the moment and we'll be integrating them over the next months. We've got some a test program in Germany that's it's going to start soon. So, yeah we're targeting getting that in the water this year. Yeah, it's a really exciting part of our development. As I say, the first time CETO has been deployed in Europe and it'll really unlock the opportunity there. We're seeing some really important support coming from the European Commission to see wave energy grow and become a real major part of the energy mix in Europe. Obviously, see there's very geopolitical challenges there in Europe with its energy supply. So, they're very keen to tap into this amazing resource of wave energy that's indigenous to many parts of that Western side of Europe. So that that project is really the game changer. We do also have a spinoff technology called MorePower. So, MorePower is another wave energy technology targeting retrofit of wave energy devices onto barges, principally for aquaculture initially, but there's also defense and other offshore monitoring opportunities there. So, yeah, those two projects are coming up and that they're the ones that are really the focus of the company at the moment.

OTC Markets
So, how is Carnegie currently funded and then how do you plan to support your future growth?

Jonathan Fievez
So, Carnegie is a listed company on the Australian Stock Exchange and we've had a listing for some time. We're also listed on the OTCQB as of a few years ago. And yeah, the funding so far has largely come from shareholders and new investors through capital raising. But we've done an amazing job securing ah non-dilutionary funding from various sources, particularly from European research and development grant programs. So, as I said before, the European Commission have set some really ambitious goals for wave energy. They can see wave energy is a really crucial part of the future energy mix because of those challenges, as I said, with wind and solar, you know, the intermittency that they have is complemented beautifully by the consistency and predictability of wave energy. So, yeah, the European Commission have set some ambitious goals and they're following up we with funding. So, you know, if you look at, for instance, our project in Spain that I just mentioned, you know, that program is largely funded probably 80 something percent funded by various European programs and regional Spanish and Basque funding. So, um yeah, there's lot of non-dilutionary support that we get to fund these programs. The US is up and coming in this space. The US is just about to complete their first wave energy facility. So in off the coast of so Portland and in Oregon, there's a site called PacWave. And PacWave is you know obviously exposed to the Pacific Ocean swells that roll in. So that's a great place to demonstrate technologies. And the Department of Energy has started a program to support wave energy companies in the US, but also to try and draw in companies like Carnegie from elsewhere to demonstrate technologies and to build the US wave energy industry. So yeah, there's a lot of support coming and I think you know the US has entered the race as well now, which is great to see.

OTC Markets
So, you mentioned the OTC markets. What role does trading on the OTCQB market play in your broader capital market strategy?

Jonathan Fievez
Yeah, so I guess giving the chance for US investors to get involved with Carnegie and what we're doing is the main benefit. And yeah, as I say, the US is an up-and-coming participant in the wave energy space. There's recent laws being passed in California to encourage the investigation of the opportunity of wave energy in that state and abroad. So, yeah, I think, you know, it's kind of a pivotal time for wave energy in the US and, you know, a great time for Carnegie to have the opportunity for us investors to easily get involved and invest in in in our company because, you know, It's certainly, yeah it's a very exciting next few years, I think, ahead of us as this wave energy test site in the US is opening and the DOE support is

starting to roll in. And, you know, we've now got a subsidiary in the US that started operating. So, yeah, we're pretty excited about what the US holds. We've recently signed an MOU with an Alaskan group there. So yeah, it's I guess the momentum really growing there and we'd love to have US investors involved in our company.

OTC Markets
Switching to the global expansion ESG side of things, how do you view your company's role in energy transition, in the energy and transition, especially in the ocean-facing nations?

Jonathan Fievez
Yeah, so I guess just to paint a picture of the world from a wave of energy perspective for your listeners, just the way the weather systems work, West Coasts are generally the more energetic areas. So, the US West Coast has fantastic wave of energy, not to say the East Coast doesn't, but I guess there you know the West Coast his is particularly energetic. The European West Coast as well is particularly energetic. So, you've got the West Coast of Ireland, the UK, France, Spain and Portugal are very good sites. But there's also the islands that are off those coasts. So, yeah, they the Canary Islands off the Spanish coast have a fantastic wave energy resource fully exposed to the Atlantic Ocean. And I mean, if you go further afield to sort of the Indian Ocean with Mauritius, Reunion Island, Yodrigues and then into the Pacific, you've got, you know, your Tahiti, French Polynesia and and many islands there. Closer to where I am in Australia, you've got Indonesia and of course Australia itself and New Zealand. So those are the countries that have fantastic wave energy resources. But just to highlight, the I guess, the islands as ah as a really good example of where, you know, way of energy represents a new and especially unique opportunity for them because, you know, many islands have a large tourist industry. They don't have the land area for solar energy. They don't have the land area for wind and they often don't want to see wind turbines because of the visual aspect. So, you know, wave energy and particularly a wave of energy technology like ours, which is fully submerged and invisible is just the perfect solution because, you know, they've got huge, you know, ocean facing coastline and then and then energy demands, and many of them are using diesel as their primary source of energy, which is just incredibly expensive and of course, terribly polluting for the environment. And their logistical challenges of getting the diesel to their island adds the cost and the risk of spillage and all those other things. So yeah, there's--it's a beautiful solution for for those kinds of places.

OTC Markets

So what are the biggest technical, regulatory, or say commercial challenges you face and how are you addressing them?

Jonathan Fievez
So, I mean, it is a capital intensive and development. And so, I would say capital is definitely one of them. These, you know, we're talking about devices in the ocean and relatively large devices that aren't so easy to, you know, to develop in a garage, let's say, you know, you sort of Silicon Valley, gadget development in a garage is really hard to sort of to use as a methodology for developing wave energy. So, it is capital intensive. The good news about that as well is from a Carnegie perspective is that we've done a lot of that work already. We've with certainly you know deployed and are deploying large devices in the water. And so the barrier to entry for newcomers is high. And so, while yes, the capital challenge is there, say, it also has that positive side. And I guess from a technical perspective, just talking about that, you know, there's, of course the ocean is harsh. And I mean, a lot of people are concerned about corrosion, for instance, and algal growth and those kinds of things. But, you know, many other industries, oil and gas industry in particular, and now offshore wind have gone a long way to solving those challenges. You know, things like corrosion protection systems, for instance, have meant that steel structures in the ocean, often oil and gas structures will last 30, 40 years. So yes, there are there are technical challenges. But you know technology has come a long way and I think there's yeah there's a lot of solutions out there now. I'd say also you know from ah from a a technical point of view, the waves are very powerful in that that that they can produce a lot of force, but the speed of that force is relatively slow. Converting high force, low speed resources into electricity is also a challenge. But, you know, as we've seen with the convert or electrification of things like buses and mining vehicles and rubbish trucks and these kind of high force, low velocity applications you know a lot of the electrical machines and power electronics that go with that are being developed in parallel so you know that's a really great you know addition I suppose to the environment which we didn't have you know 10 years ago when the-- before the EV and electrification process had really begun, you know these electric generators and things of the right scale for our technology didn't really exist, but yeah, they're much more common now.

OTC Markets
And looking ahead, what are the milestones investors should watch for over the next, say, 12 to 24 months?

Jonathan Fievez

Well, yeah, focusing on our CHI program, this which is the project in Spain, would say, know, the completion of the test program. So, you know, before we put the device in the water, we take it through a series of tests. One of the tests that we can do, which is actually quite unique to us, is what we call the back-to-back test. So, you know we have, as I explained before, we have, these three connections to seabed and three power takeoff systems. So, three kind of more or less independent systems that can produce energy from or electricity from this motion. So, the way we can test those before we put it in the water is we can actually use one power takeoff device to drive the other. So, we essentially connect them together with the belt that they use to connect to the seabed. So, we connect them directly together and one drives the other. So, one pretends to be the effectively the ocean pushing or pulling on the other one, and the other one is the power takeoff and then they can switch roles. So, in that way, we can really run them through their paces before they go in the ocean. And that's really critical in terms of, you know, having knowing what's going to happen when you deploy this system. So, I would say number one, testing of the achieve componentry and subsystems, and then of course deploying. So, deploying into the ocean is a real sort of watershed moment for us, which we're really excited about. So yeah, we will --there's a lot of build up to that. And I think investors, you know as we've seen in the past, as we've come very close to deployment, that's when the investor interest really peaks. Finally, would say, you know, the next project development that follows the Achieve project, will that the development of that project and announcements related to that will start to come where we'll be talking about sort of megawatt scale deployments, and we'll be targeting in on or honing in on on particular sites. So, yeah, that would be the three milestones I think would be good to watch.

OTC Markets
Great. And finally, what message would you like to share directly with the U.S. investors who are just learning around Carnegie Clean Energy?

Jonathan Fievez
Well, I think number one is, you know, have a look at wave energy to begin with. I mean, wa in a lot of US investors probably haven't heard too much about wave energy. In fact, I was involved with our chairman on a road show in the US. We did, you know, investor presentations on the East Coast and the West Coast. And, you know, there there's a large proportion, we're only learning about wave energy for the first time during our presentation. So I think, you know, that is number one is, you know, go onto our website, learn about wave energy and and the amazing resource that holds and the amazing kind of unique characteristics that it holds.

And as solar and wind gets built more and more, there needs to be that sort of base production covering off on those times when solar and wind aren't available and that's wave energy. So, I'd say I'd say, number one, that... you know, that homework and then also follow our progress. You know, we've got a great, I would say 12, 24 months of news coming out and progress to make in terms of our project in Spain. So yeah, you can sign up on our investor center and follow that progress. It's yeah, it's going to be more and more graphical and more and more interesting with videos and pictures of this deployment. And yeah, I mean, I'd suggest that you know wave energy could well be the next big thing in renewable energy. So it's certainly one to watch. And as I say, it's going to be a really crucial part of the energy mix in the future because we need that firm, consistent energy.

OTC Markets
Nice. Fantastic. Well, it was great to chat with you, Jonathan, and to hear about the passion you and the work you do. I really appreciate your time today. And we look forward to hearing more about Carnegie's future success.

Jonathan Fievez
Yeah, thank you Stephen.

OTC Markets
Have a great day.

Jonathan Fievez
You too.

OTC Markets
Thanks again to Jonathan Fievez, CEO of Carnegie Clean Energy, which trades on the OTCQB Venture Market under the symbol CWGYF.
**This is an autogenerated transcript and may contain typos.*