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Interview with Ian Clifford, CEO ZENN Motor Company.

DJ: With the cost of gasoline, we were talking about it earlier in the program, one of the things that has changed, it sort of changed how we looked at a lot of things, I mean this effort to go green – the idea that we could use alternative forms of fuel, the idea that rather than using the standard car that we always have, we would move to something else. Of course Toyota has really grabbed on to that and a lot of the other efforts have been made too, to grab onto that, But Ian Clifford has done something unique. He's the CEO of ZENN Motor Company, he's the CEO of the most innovative electric car company in North America. In fact he just spoke with the Metro North Chamber of Commerce this morning, and he joins me in the studio. Ian, thanks for coming in.

IC: It's a pleasure to be here.

DJ: First of all talk to me about the concept of the electric car, before, gasoline was four bucks a gallon, now it's dropped down a little bit, but let's go back when people would say, "What's the point? I mean – come on man – I can get gas for two and a half bucks a gallon – whaa – shut up – just pay it and move on." I mean talk to me in that light and then let's talk about it as things have changed.

IC: I'll take you even further back than that. If you go to the turn of the last century, in NYC most of the... in fact all of the taxicabs were electric powered. So were talking 1910, 1911, every single taxi cab in NY ran on a lead-acid battery that they recharged at night and drove during the day. So, we're talking about a technology that has been around for as long as the internal combustion engine has been around.

DJ: Wait a second...ehh...we could put people on the moon, ok, we have things going to Mars, we have people going and things happening that we have never been able to do and you're telling me that 100 + years ago we were doing the one thing that we say that we can't do now

IC: Oh Exactly, Exactly

DJ: Are we just being lied to? Are we just, or are we just more stupid than we used to be?

IC: Well I won't ...[slight laugh] a bit of both...

DJ: Those are my two options - that's it - you get one of those two.

IC: [slight laugh] Probably a bit of both, a bit of both on that one...I think that you know, the reality of what happened at that time was that gasoline provided an energy source that could take you a much greater distance, and Americans and then everybody else around the world wanted to travel farther, in their vehicles. So the limitation has really been the battery, so for the last 100 years we haven't seen huge breakthroughs in electrical energy storage, but what we are going to see in the next 18 months to two years are some massive, massive changes.

R: Why haven't we seen breakthroughs over the last 100 years, is it because there was no desire, no demand for it, and so therefore there was no reason for it?

IC: Well I think you're right. You know, when gas was cheap, and a, and global warming and pollution wasn't a top of mind issue, we weren't looking for alternatives, alternatives to the internal combustion engine vehicle – now we are. You know, we have got an environmental imperative that is huge, and then we've got gas prices that are, that are you know, bankrupting people. So electricity is a better way to move a vehicle down the road. It's..it's highly, highly efficient. It's renewable. You know you can, you can with wind power and solar power and other renewable energy, you can create electricity very, very efficiently and it's much lower cost. So you have, you know a ground swell building up around the world where people want alternatives.

R: Talk to me about advances then. I mean you've said that in the next 12-18 months I mean what have we seen recently... we've talked about the Volt in the past again this was the effort by GM... all the money they've been dumping into this, but we can talk about the Prius and those are slightly different in terms of how they work...but talk to me about advancements.

IC: So what we've seen for the last century is a chemical battery, so a lead-acid battery and more recently lithium-ion technologies, those are complex technologies and in the form of lithium-ion, very expensive technologies. So when I founded our company back in 2001 I started looking around for advancements, and really game-changing technologies. There's a company in Austin TX today called EESstor, that's e -e-s -t -o -r , developing a solid state energy storage device, so this is not a chemical battery, this is more like a capacitor, if you will, and I won't get into the technical jargon on this

DJ: Good 'cause my eyes are already starting to roll up in my head.

IC: Fair enough exactly. Yah, what it means is it's an energy storage device that can store, you know 4 or 5 times the energy in a much smaller package. So we've got a very, very high density energy storage device, it can be charged in minutes, as opposed to hours. So we'll have an electric car with a 250 mile range that will take 5 minutes to recharge, not 5 hours, not 10 hours, something that will become extremely practical for the average consumer, and it will be affordable, and that's probably the last, very important aspect.

R: When does that come, if it already hasn't?

IC: This technology was developed about 10 years ago and it's being commercialized right now. So we expect, our relationship with this technology, is we expect by the end of this year to have production prototype, and then full production in 2009. So it's right around the corner.

DJ: Wait a second though – you're just a dude.

IC: I'm just a dude [laughing])

DJ: I know, I know , but I mean that, you're just a dude. What I don't get about this, is that if this technology is available at the level that you say it is, and we have companies out there with billions and I mean billions upon billions of dollars at their disposal, they could turn around and do this, almost on a dime if they had the resources at their disposal, and they do.

IC: The...the trick is the science. I mean this is a scientific breakthrough so that's dependent on the individuals who are developing it.

DJ: But that was 10 years ago!

IC: Exactly. And, and in 2003, um, we secured an exclusive license to their technology. So we were in before anyone else was in. So, I realize we're a, you know we're a little dot in the automotive, in the automotive landscape but we have exclusive rights to this technology.

DJ: Why don't they just buy you off?

IC: Well they may – you know...

DJ: are you waiting for that?

IC: No...

DJ: I want somebody, I want somebody to come and say - I'll tell you what Ian, here's what we'll do, you know, here's a couple million dollars, go back to Toronto, you could move to Miami, get yourself a thong bikini, and lay out on the beach – that's a beautiful thought...woof –

IC: [laughing])

DJ: Then we can simply take that technology and use it or shove it in a basement somewhere and sell more oil.

IC: It's a very, very interesting question. First of all, we are a public company, so, so making us kinda disappear is a little more tricky in that regard. But, but the interesting thing about our business model is that we intend to become an enabler for this technology with every car maker around the world so we are going to develop drive systems that can go into a Ford, a GM, a Toyota vehicle.

DJ: Oh, so it's like Mitsubishi, where with Mitsubishi they would actually make a drive train and sell it to everybody.

IC: Exactly! Exactly! It's like in the computer industry, it's like the Intel model. So we're the "Intel inside" if you will, of the automotive industry. So we're not going to compete with a GM, GM is going to be our customer. And that's where it gets exciting!

DJ: So let's talk about money now. I mean you say that it's about going 250 miles or more and you can do this in a matter of moments to charge it back up - how expensive are we talking about – can the average person do this or...

IC: This is, this is the beautiful thing about this technology is that it is affordable and, and my intention when I started the company was to make sure that we had affordable zero emission vehicles. So our target highway capable vehicle will be at par, or very close to par with the

internal combustion vehicle that it replaces - so we are talking about a 25 to 30,000 dollar sedan, not a, not a 60,000 dollar vehicle.

DJ: Isn't that part of the problem that GM has right now.

IC: It's a huge problem

DJ: As I recall, their biggest challenge has been to deal with the energy question, with with...

IC: it's the battery...

DJ: ...the battery question

IC: yah...

DJ: so, so what is it that the people out of Texas are doing that GM couldn't figure out on their own or what is it that Toyota is trying to accomplish...

IC: It's a, it's a paradigm shift in energy storage. It is a, an absolute, it's a, it's a, it's a solid state energy storage device as opposed to a chemical storage device. Chemical batteries are inherently very expensive, and very, very heavy, and very bulky. Uh, this, this type of energy storage that's being developed in Texas is much smaller and much more cost effective.

DJ: Give me a timeline. How long before this thing actually starts for you where you could literally say - I can sell you a car or I can sell you a drive train that actually works and you can hook it up and I can drive down the road.

IC: We've targeted the end of 2009 to launch our city, our city ZENN vehicle. So it's around the corner.

DJ: So you're talking 16 months.

IC: Yah, exactly, it's well under way.

DJ: How smart does this make you feel? I mean, you were doing this when gas prices were relatively..

IC: a lot lower

DJ: ...speaking they were very, very cheap. Were people back then saying - what the heck is wrong with you?

IC: But it wasn't so much, at the time for me it wasn't so much about gas prices it was about the fact that I was driving in downtown Toronto, stuck in gridlocked traffic, burning an internal combustion vehicle on you know, the earliest smog day in the history of the city. And you know hundreds if not thousands of people dying in Ontario from poor air quality. It was, it was much more an environmental imperative at that time for me, and then, you know, the gas prices have certainly helped. [chuckle]

DJ: But, but I mean, I mean that's, that's the smart side of this that I'm talking about too. That, that it seems to me you're riding this wave which has maybe developed collectively over time. It is not just the price of gas being 3.50 or 4 dollars a gallon or more. But it's also that people have become aware of all of the other problems too, I mean...

IC: Absolutely

DJ: When, when you look at where you are going next, how do you take this independently or how do you link with other very large corporations to deal with this – what do you do next?

IC: Well as I say – we, we become an enabler. I mean the idea of ZENN Motor Company is that we become synonymous eh, with electric drive, eh, in transportation and that the ZENEnergy Drive, as we've called it becomes the de-facto standard for, for electric drive systems in, in automotive and we believe we can do that.

DJ: So how wealthy do you expect to be in 10 years from now?

IC: Not so much about that, I mean eh, if the company is successful and as successful as we anticipate, it's, it'll be a tremendous opportunity for all of our shareholders- so that's exciting – I think that's, that's a great opportunity – um – but more importantly for me personally is the environmental aspect of this and really getting us off of gasoline as our primary fuel to move vehicles down the road.

DJ: Ian thank you very much for coming in the studio, I know you are getting ready to fly out of here so thanks for taking some time.

IC: It was a real pleasure. Thanks.

DJ: Ian Clifford, CEO of ZENN Motor Company – the most innovative electric car company in North America.