



Wicked Problems PODCAST

Wicked Problems – Series 3, Episode 4:

Dan Caesar of Fully Charged

Transcript

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Transcript

0:09 Toby Corballis

Welcome to another episode of the Wicked Problems podcast. As we continue our EV series, I'm in conversation this week with Dan Caesar, CEO and presenter of Fully Charged, the world's number one clean energy and electric vehicle show. Dan's on a mission to inform, educate and inspire millions globally on the benefits of cleaner energy and transport. He's a fervent advocate for electric vehicles and home energy technology.

0:38

Dan transformed the Fully Charged show on YouTube, pioneered its exhibitions and expanded it's everything electric range and recently launched Electric Vehicles UK. You can hear all about that work on this episode and also about how he conceived and delivered multiple groundbreaking projects like Fully Charged Live, Stop Burning Stuff, the Zero Carbon Kitchen and the Renewables Roadshow. It's a really interesting episode, I think, and, if you're into EVs and clean tech, you're going to really enjoy it.

1:12

Dan, welcome to Wicked Problems. It's great to have you on.

1:16 Dan Caesar

It's great to be here.

1:17 Toby Corballis

I'm really keen to talk to you, as I am to all of our guests. But what I really wanted to talk to you about is, of course, you're CEO of not one company, but two... or two initiatives - I don't know if they're companies or initiatives - but one is fully charged, of course, or everything electric - I think it goes by both names. The other one, of course, is Electric Vehicles UK, and I was hoping we could talk a bit about both of those today.



1:39 Dan Caesar

Yeah, I'd love to. I'd love to talk about... Those are my passion projects. I'm very lucky to have a job where I get to actually wake up in the morning and do something I'm really passionate about, which is in short, doing anything to promote electric vehicles and clean technologies in a reasonable, balanced way. I must say, not exaggerating, but actually to really talk about the benefits of both of those. And I've been working on a Fully Charged Show YouTube channel for eight years. But as many of your listeners might know, it was set up by a lovely gentleman called Robert Llewellyn, who's most synonymous with Red Dwarf and with Scrapheap Challenge. And he did a fantastic job of setting it up. And I met him eight years ago and I said, how do you make money out of this incredible channel you started? I thought it was going to be a huge thorough and, you know, big commercial endeavour. And he said, well, it's just me plus a camera person basically. I don't make any money out of it. And that's how we started our journey together, the passion project rather than the commercial endeavour I guess, in the beginning.

2:38

I mean, I've been promoting cleaner technology since 2003. So, Robert and I were on the same page when we first met. I'd been talking about heat pumps and solar panels and batteries and electric vehicles for quite a long time already. I was already driving electric. And one of the things I observed was the industry quite like to talk to itself, about how great these technologies were, but didn't necessarily like to get out in the real world and talk to people. And I felt strongly, you know, if electric vehicles and those sorts of technologies were going to be popular, we actually needed to get out there and actually explain and educate and excite people about them. And Robert had already started that process with the Fully Charged show. So, I was like, this is great: you've created something the world desperately needs... And I guess I wanted to use my experience in running businesses and communicating to help him turn it into something; into an ongoing enterprise. And yeah, it's grown quite considerably over that period of time.

3:27

And I think it serves a very, very useful purpose in educating people about all these, all these technologies. And there's lots more to come because as you may or may not have noticed, misinformation around electric vehicles and clean energy has probably ramped up, if anything, over the last couple of years. And so Electric Vehicles UK is actually a new initiative which enables us to tackle misinformation in the first instance and then hopefully get on the front foot and start talking about the benefits of factory electric vehicles rather than having to clear away all the rubble and the detritus of negative untrue stories that actually circulate.



3:59 Toby Corballis

Yes, it's a theme that does raise itself quite a lot when I talk to people on this show. So, I was, you know, speaking with Sam Clark from GRIDSERVE and he was talking about, and he was talking about, you know, some of the misinformation that's out there. Jordan Brompton, from My Energy, she also was saying it never used to be that way and then, suddenly, it became ramped up and politicised and, you know, there's so much of it and it's a real sort of, I guess, effort to try and counter it... And that's what you're doing with Electric Vehicles UK, right? So, you're that's part of the reason for that initiative being set up is to counter that misinformation. Is that right? Have I got that right?

4:35 Dan Caesar

That's correct, yeah. Electric Vehicles UK is really designed to help increase consumer confidence in electric vehicles because there's just, you know, so much misinformation out there. You quite often hear very confident people proclaim: "this is the case. You know, batteries don't last and once they're used, you have to throw them away." You still hear that even in 2024, even though an electric car may well last, you know, for 500,000 miles and, actually, the batteries can be recycled almost entirely at the end of the use. Perhaps they can even go into a second life as home or building batteries. In the meantime, you hear these confident proclamations and they're coming from somewhere, right? There's misinformation out there, whether it's online, whether it's irresponsible headline writers, maybe it's even populist politicians trying to, you know, spread falsehoods about these technologies. So, but actually being able to deal with that is really important. I think the industry has found that quite hard. We're all working very, very hard to talk about these technologies, but maybe not in such a joined-up way. So, this year we formed Electric Vehicles UK, which is designed to bring all of industry and EV drivers together because actually our lived experience and the realities about electric vehicles are actually a lot better than you than you might think. So it's my pleasure to lead that initiative for a year and ultimately to set up a self-sustaining business that can take on misinformation and start to get, as I say, talking about the benefits of battery electric vehicles.

6:00

But it's a big endeavour and, and industry has welcomed Electric Vehicles UK and we're just starting to make some real progress in that regard.

6:08 Toby Corballis

And how do you counter that misinformation? What techniques do you adopt? Because it comes through multiple channels, right? It comes through the press, as in newspapers, it comes through websites. You said politicians maybe who've got an agenda I suppose, might sprout some misinformation about EVs. So, there's lots of different ways it's coming to people. How do you actually tackle that then? What techniques can you use?



6:31 Dan Caesar

Well, we've got a few different techniques that we use on the Fully Charged show. We've been myth busting for a long, long time and we have trialled and sandboxed a variety of different approaches that that work. But the reality is from our perspective you have to play whack-a-mole with all these different types of misinformation. But equally you can get tied up in knots if you chase every single story because there are just so, so many of them. So, to give you an idea of the practical things that we are doing, we have a rapid response group. Sounds very grand, I know, but actually when a prominent piece of misinformation comes out, let's say it comes out in a newspaper, for example, we would actually want to tackle that very, very quickly. And the way we would go about that is we have a WhatsApp group of experts and if a piece of misinformation comes out, our aim really is to counter that within about four hours, to actually come back with a strong rebuttal, to talk to the journalist who maybe started the fire, started that story, not in a confrontational way, but to explain to them, maybe they haven't quite got that right and, you know, could we help them to better understand the story? Also to make sure that our counter story is cascaded out through industry, through EV drivers, through other journalists so the story doesn't go viral because what often we see is a story will actually be in one newspaper and then the next day it will be in another because – specifically misinformation about electric vehicles does spread quickly, you know, and so we want to be able to counter that. So that's just one of the way in which we'll tackle it.

7:58

We also have an electric vehicle drivers' group. We want to enable electric vehicle drivers to get their lived experiences of electric vehicles out there more quickly as well. Sometimes talking to someone in real life, but also frankly too, if they if they see a comment under, you know, a Daily Mail story, for example, which is full of misinformation, they actually can say, no, that's not my experience. I've had an electric vehicle for – in my experience, it's actually been for nine years – I've driven 300,000 miles with zero problems. You know, and people need to be able to express the real lived experiences equally.

8:28

We will be talking to politicians, we will have a public affairs angle to talk to politicians, but also to get them in the cars as well. The cars themselves actually are a great way of converting people because they generally are, you know, really, really good pieces of technology that people like. We will be tackling press, politicians, all manner of different stakeholders.

8:50

We'll also be running events for influencers. We're looking to do a regional roadshow for test drives around the country as well.



8:57

We're looking to create a central online destination, which is a collection of not just the fully charged show, but all of the great YouTube channels; of all of the great data; all of the great news stories, podcasts, etcetera – in one place, which is going to be called “electricvehicles.uk”. So the whole industry can point to this one location. So, and a multitude of different tactics will be employed and we certainly hope we can start to suppress some of the information that's out there and give people a place to go where they can counter that. And as I said, you know, the key thing is can we get control of the narrative so we can start to talk about some of the benefits of electric vehicles. You know, they're great. You know, they really are great. I'm not just saying that, you know, they're fantastic pieces of kit. I wouldn't go back and we know from our audience surveys and the surveys of others that over nine out of ten people would never go back to a combustion electric vehicle from an electric vehicle. There's a reason for that, right?

9:52 Toby Corballis

Yes. I drive one as well and I wouldn't go back now because technology is great. It's going to go for run for ages. It's just a good piece of kit that... I can't see why I would want to go back to an ICE vehicle. I suppose people do still have ICE vehicles and some of those can keep running... And it's not like you have to ditch your car tomorrow and be forced to go and buy an EV, right? It's just that if you are buying a car, an EV is a very good thing to consider both from an environmental perspective and now also the cost perspective as you now have price parity with a lot of ICE vehicles and with the technology around the batteries coming down, I suspect we're going to see electric vehicles becoming cheaper than their ICE equivalents at some point in the not too distant future.

10:38

I did note that I went to Fully Charged, actually in Farnborough, or Everything Electric South, I should say in Farnborough and the two talks that I went to, that had the most attendance, were both about tackling misinformation. And so, one was your talk about the launch of electricvehicles.uk and the other was a sort of a panel discussion where people were talking about it. So, there's a lot of interest in busting those myths, I think from within the industry, which is a great thing.

11:10

Everything Electric South... What I liked about it was that you could also go and like, you know, provided you booked in advance, you know, you could go and test drive some of the vehicles out there. So, there was a lot of people being able to actually get behind the wheel, which I think is a good thing. Tell me more about Everything Electric, because that's been going a few years and you do it in a number of locations, right? It's not just in Farnborough. It's, it's all over the place.



11:36 Dan Caesar

We do, we do now. It began as Fully Charged Live at Silverstone in 2018. You know, it's one of the key ways in which we help fund the whole business, the YouTube channels and all the rest of it was to run the exhibitions. We've now done seventeen of them around the world. By the end of next year, it will be twenty-two so we're running about five of them a year and we have ambitions to get up to ten a year by 2030. And as you say, test drives are a central component of that, but as the name suggests and recently, we changed the name – it is Everything Electric – so it could literally be from, you know, electric one wheel to a scooter to a bike right up to, you know, well, as big as we can get. If we can get an electric plane to the show, an electric train, etcetera, we will do that. But electric cars are really, they're kind of the sweet spot from a transportation point of view... And then, also, everything electric from a clean energy point of view as well so whether it's energy providers or it's batteries, you know, EV chargers, solar – vehicle to grid is going to be a huge, huge thing – we cover off all of those different technologies and so we have thousands of test drives, dozens of talks, you know, we have all the technology in one place. It's been a really, really successful format for us. So, in the year ahead we're going to Sydney next and then we've got a show in Melbourne, our first show in Melbourne in November – the Australian market is really, really buoyant, really, really fast growing. We go back to Vancouver in Canada in September and then next year we've got our London show in Excel in April and our Farnborough show in October, and then we're just working out where our sixth show is going to be in 2026. We did have California as quite a strong favourite for that, but recent political events have made us just pause slightly.

13:11 Toby Corballis

All right, OK. So yes, that makes sense. Once you work out what the direction of travel is going to be in the, [coughs] excuse me, in the US... And I've done a lot of reading on this, just a bit of a segue, but there's a lot of people thinking, well, there's so much momentum now behind the industry that it doesn't really... it's not that stoppable... Just wonder what your thoughts are on that?

13:35 Dan Caesar

I had a session titled, at Fully Charged Live in 2018, which was called “Why Megatrends will Trump Politicians”, and yeah we stand by that six years later. There is so much momentum in this area. EV sales are up from I think 13.9 million in 2023 to... projected to be 16.7 million in 2024, as predicted by Bloomberg. Yes, some markets are growing faster than others. I mean, that's just absolutely the way it's going to be, right? It's not going to be linear uptake in every linear growth in every single country. There's obviously economic factors, there's policy factors that affect EV uptake, but globally it's growing and in most markets it's growing; some it's growing super-fast; some it's growing slow; there are a couple where it's not growing quite as quickly now, but we do feel that, you know, the momentum is there.



14:32

Changes in the American political landscape do matter and they will have an impact, but actually this is a global affair and, you know, at the end of the day, 4.2% of the world population is in America. The rest is, is elsewhere... And actually, really where the focus is now is Asia. It feels a little bit like the energy transition is tilting the axis of the world, the economies of the world, towards Asia, particularly China and Korea, who are a long, long way ahead in terms of their cars, batteries and related tech. So, you're going to see an increasing amount of frustration I think in the US. They might be able to operate something of a walled garden there in terms of, you know, how they keep Chinese car companies out of America, for example, but ultimately the big picture is only going in one direction.

15:25 Toby Corballis

Yes. And I think that, you know, as you say, is we always think of America as being this huge, huge global powerhouse, which I mean is. But in terms of population and the way that people are, you know, the Chinese, for example, they are really adopting this technology in in in a massive way. And that's driving the price of, you know, all of the components, not that there are that many, but, you know, the batteries in particular down and even then, if you put tariffs on top, it's still, you know, doesn't stop that adoption and that growth it doesn't seem so, yeah, that's very important.

16:02 Dan Caesar

Tariffs are the ultimate two-edged sword. There was an automotive specialist in America who recently said, you know, "a cave is a grave," you know. That was his kind of view on isolationism and tariffs and things like that because it cuts both ways, right? The reality is that America has a big automotive market, for example, and it's a big energy market so I'm sure it sometimes feels like it's a country that doesn't need to lean on the support of others but when you actually drill down and you look at it, you'd be surprised at how many cars America's making and exporting elsewhere. Now, if they haven't got the most up-to-date cars by either technology or the fuel type, then their exports are going to take a hit. Equally, they export a lot of their fossil fuel derived energy overseas as well and if, actually, China, for example, is investing at a hugely rapid rate into renewables and that's bringing the cost of those things down, then the things that America is trying to export become less and less competitive as well. So it's very tempting to think you can, you know, put your fingers in your ears and say this isn't happening, but actually the reality is that it will continue to happen and it will probably be to the detriment of Americans and American consumers in particular, who won't be able to access cheaper electric cars, won't necessarily be able to access cheaper energy. So, it's one of those things you kind of watch and it changes. I mean, I think the UK now has got a government that's obviously more conspicuously interested in electric vehicles and clean energy, and I think that is going to be to the benefit of Britain. Some economies will do well out of this. We are worried for America and Germany and Japan because they're automotive strongholds and it's harder for them I think to pivot to an all-electric future where we think actually China, Korea, Australia, UK, Canada, Scandinavia, several other countries could probably come out of this as net winners. Some of those other countries' economies are going to get smaller.



17:54 Toby Corballis

But Norway is a good case of point, isn't it? Which is way ahead of most other countries in, I'm going to say Northern Europe, I know it's Scandinavia, but I just take Northern Europe and Scandinavia as one for the sake of this, they are really far ahead in terms of deployment, and I think that deployment is ramping up here in the UK as well. It's really, you know, in recent years it's gone, you know, there's a lot of lot more charges in the ground and I think there's more charges now than petrol pumps in the UK, which is an interesting statistic. So you do Everything Electric, you do electricvehicles.uk. There's also there's a YouTube channel as well, is that right?

18:34 Dan Caesar

There is an Everything Electric YouTube channel as well. So, if you go and watch the Fully Charged Show you're going to see mainly things with wheels – cars and vans and bikes and such like – and then if you go to Everything Electric, actually it's energy. We do cover some micro mobility and other topics there. In fact, the Fully Charged Show podcast is hosted over there as well. But yeah, home energy is actually where I got into the industry, you know, we talked about heat pumps and things... So, we've really worked hard to make that a bigger part of what we do and, actually, if you come to our live shows, you'll see it's an electric home and motor show. It's both those things simultaneously because often what happens is some people get solar panels and then they get an electric car. But actually, more typically what happens is someone will get an electric car, it will then change their relationship and awareness of energy and before you know it, they're thinking, well, should I change my energy provider on my tariff? Do I need an EV charger? What if I was to generate my own, you know, by having solar panels? And obviously we think vehicle-to-grid bidirectional is going to change the game again and make people realise that an asset they had sat on their driveway or sat on the street 90% of the time unused, actually can be used for other purposes, even to, you know, reinforce and back up the grid where necessary. So really exciting times ahead and, as I said, that bidirectional piece, I think will really open up people's minds when they realise they can actually make money out of their car.

19:56

Yes, I think that money out of their car, and, as you also say, money out of perhaps you know, if they've got solar panels, they can generate their own electricity that can then or power their home, but also, you know, if they put a battery on the wall somewhere, perhaps from an old EV, but I don't think there's that much salvage going on because they can last so long, but, you know, you put a battery energy storage system on the wall, then you can, you know, feed that and then when you've got excess power, you can we can either use it to power the car, but you can also give it back to the grid and get paid, right? And that ability to take power out of the car... So vehicle to grid is really starting to ramp up now, right, because there's more, more bidirectional inverters in the cars and more companies developing that technology.



20:41 Dan Caesar

I mean, that is absolutely right. I mean, what you're seeing is that there are always... You could look around the world and see countries that are slightly ahead of you, which is, you know, our one of the things that Robert Llewellyn and I bonded over originally was "the future's here, it's not just evenly distributed." You know, we see stuff that's going on in China and Norway that's ahead and it's actually quite useful to show people what's going on with the BYD factory in Shenzhen, for example, to show people what's going on in Oslo in terms of the uptake. But as far as V2G is concerned, it looks like Australia is going to be the leader. So, they're basically turning V2G on early next year, ahead of everyone else and obviously it's hugely appealing to them because how much solar capacity do they have out there? It's absolutely huge. I think we have over a million solar rooftops in the UK. They have over a million in Brisbane alone. So, it's, you know, and they have a lot of batteries going in there as well – obviously the sunshine is great – Often they have more sunshine, more power, more electricity than they can cope with, believe it or not, pricing goes negative and it's an opportunity for consumers to earn, so... The Australian market is going to be the one to follow for vehicle-to-grid, I think it's going to go really, you know, really skyrocket that market and grow it much more quickly.... And it's interesting, isn't it, because markets are at different speeds. I mean Norway – you mentioned Norway – probably did a lot of its hard yards before misinformation came out so now sort of 95 out of 100 new car sales are electric. They think it might be pretty much close to 100 by the end of 2025; whereas, in the UK we're obviously... we are... EV sales have been quite robust at the last six months, both used EV sales, which is great news because used EV sales account for about account for about four out of five cars sold, and the new cars sold have been typically above 20% of the all cars sold as well. So that market is growing.

22:30

But we have our own advantages. We have loads of wind here, for example. We have great companies like Octopus, for example. The UK is actually in with quite a good shout. We have no tariffs here, ironically, as a result of Brexit, so we can, you know, welcome overseas car manufacturers the way that others can't. So, I do feel like the UK – I'm quite optimistic to the UK – is actually quite well placed to be a net winner out of this whole move to clean energy.

22:53 Toby Corballis

I hadn't understood that point particularly about, you know, the fact that we can – I guess it's a Brexit benefit – but we can actually, you know, attract more EV manufacturers into the... Or not just EV, I suppose... Anything electric or Everything Electric, just to grab a pun there for a moment so that's no, no, that's a that's a really interesting point.

23:14

Look, if people want to know more about the work you do, I think we've already said everything electric.uk, so not dot co dot uk – don't put the "co" in – but where else can they go?



23:27 Dan Caesar

Well, I mean the obvious things. We've got so many brands, obviously we've made it a little bit more complicated. There's a reason, a rhyme and a reason for all of that, but you know, if people want to watch the fully charged show on YouTube, that's the best place to go and watch that. They can watch everything electric on YouTube as well. But if they want to go to our The Fully Charged website that's "fullycharged.show" and about the time that this, the recording comes out, if maybe shortly after, "electricvehicles.uk" will be up as well and that will hold all of our content, but also the content of others. So, we're working with other Youtubers and, as I said, other podcasters, other media so actually, that will be the best place that contains all of the information across the world so I think that'll be the one to bookmark ultimately, because every time we have an episode, it'll go there as well, but also other Youtubers, other content creators too. So I think that... we think that's going to be a really, really good moment, where the industry can all point to one site where everything exists and at the moment, you know, we were talking to lots of people about Everything Electric sales recently – you mentioned that – what was quite clear is that your journey, if you're Googling "electric vehicles" or Googling "clean energy", your journey... you can you can find the right provider or the right expert straight away, but it's more likely you end up down a rabbit hole of misinformation so the ability for the industry to point to one website where it all exists, we think is going to be quite a big moment.

24:44 Toby Corballis

Oh, OK, that's a that's a good tip for people to follow up there and what we'll do is we'll put the links below the show so people can click on those links and go and see those sites and as you say, hopefully by the time this goes out, everything electric.uk will be fully operational and they'll be able to link through to it, but, if not, it won't be very long after so...

25:04

It won't be very long after, and then come and see us in London, and Sydney, and Melbourne, and Vancouver, and Farnborough.

25:12

Yes. And I do encourage people to do that because it's great fun. There was, you know, you could, I said you could go and book a test drive on a car. So, there was BYD, there was MG, there was a few others at the show, but there was also, to your point, it's everything electric. So I, you know, I was rushing around a little part of the, of the, in a hall on a, on a Brompton that had a, you know, a battery attached to it that was very, very lightweight and very slim, which was interesting development and all sorts of other things: scooters and, and all sorts of things. And then people demonstrating the latest V2G kind of technologies that they had heat pumps that were there. So, there's a lot of really cool tech and really the ability to be, I guess, hands on with it at some level, as much as you can with some of it. But yes, so I would encourage people, if you're in Sydney, if you're in Melbourne, goes to the show, it would be a very good experience for you and also everywhere else that you're going to put it on and we'll wait to hear about the one in the US as to where that might be for a later time.



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26:14 Dan Caesar

Yeah.

26:15 Toby Corballis

Yeah, Exactly. Dan, it's been an absolute pleasure. Thank you very much for your time. We look forward to people listening and enjoying the show.

26:23 Dan Caesar

Yeah, thank you very much. It's been great to speak to you.