

## Supporting Clean Energy Entrepreneurship With Danny Kennedy | Transcript

Introduction ([00:02](#)):

Welcome to Green Building Matters. The podcast that matters for green building professionals. Learn insight in green buildings as we interview today's experts in LEED and WELL. We'll learn from their career paths, war stories and all things green because Green Building Matters and now our hosts and yes, he has every LEED and WELL credential. Here's Charlie Cichetti .

Charlie ([00:33](#)):

Be sure to check out the Green Building Matters community where you can have unlimited exam prep for any of the professional credential exams you're tackling next as well as putting your continuing education on autopilot, saving time with GPS reporting your hours on your behalf. Check it out. [Gbes.Com/Join](https://Gbes.Com/Join). Now enjoy this episode of the Green Building Matters Podcast. Hi everybody. Welcome to the next episode of the Green Building Matters Podcast. I'm your host, Charlie Cichetti, where every week I get to interview green building professionals in the world. Today I've got a unique guest because it's definitely green and is definitely sustainable. Danny Kennedy here with New Energy Nexus. He's got an interesting story to tell us. Danny, how are you doing today? Good. Thanks for having me, Charlie. Well, I'm excited to learn more about your background. Some of you can already tell from the accent probably ties to Australia and Sydney, but definitely also working now in the US and in parts of California. So why don't we start there? Can you tell us a bit about your background? Where'd you grow up? Where did you go to school?

Danny ([01:36](#)):

Yeah, I'm a bit of a nut. I was born in Los Angeles and got out about age seven because that was back in the seventies when the air quality was really bad. My parents had an oldest son, my brother who had bad asthma and needed to be somewhere else so we relocated to Sydney, Australia. I grew up here in Australia where I'm talking to you from today and because my family is still here, I moved back to the states in my early twenties and built a career there. I've lived this bi-coastal bizarre life, but I get the benefit of living in two great cities. I'm now in Oakland, California, but know Sydney pretty well and run this global organization, New Energy Nexus that supports diverse entrepreneurs everywhere to drive the energy transition and sort of build equity into this massive shift we're going

through electricity and mobility services of which buildings are a big part. So really good to be talking to you.

Charlie ([02:36](#)):

I watched your Ted talk. We'll put a link to that. There, I think you said, you're not going to talk about your greenpeace and then you started a solar business. Fast forward to there was a lot of activism, entrepreneurship, and now your organization here. Connect a few of those dots though with some of that on the ground work you did early in your career.

Danny ([03:00](#)):

Reality is I was an activist as a teenager fighting the good fight against sort of things that we now take as given, chopping down ancient forest is bad for making toilet paper and the climate is a big issue facing humanity, and we need to stop burning fossil fuels and did that for about 25 years. In 2006, decided to sort of shift into driving the solutions basically and found the best way to do that was build businesses. Built a couple businesses, some of your listeners might have heard of, Sungevity was my first company that really sort of pioneered the use of remote solar design in the market for solar deployment. Sungevity is no longer in the US but it persists in Europe as the largest company out of the Netherlands owned by NG. I helped build Mosaic, which is the big solar loan business for the residential solar market in the States.

Danny ([03:52](#)):

A couple others more recently, I've been privately focused on the bottom of the pyramid and opportunities in emerging markets like the Philippines and the South Pacific. In Kenya, I sit on the board of the sort of largest microgrid business there, but all of it's about promoting this energy transition, which is really being driven by the very low cost electricity we're getting out of solar and it's going to get cheapest still and then bundling solar with other technologies like wind and batteries and deploying it in all sorts of ways. Some of them distributed some of them central stations and the businesses that go behind that. With a lens increasingly jolly of how do you use it also to uplift communities and change the fate of nations and cities because the truth is like in the United States, we've, under-invested in the urban reality that we exist in as humans for decades, and there's this big pulse of economic change coming, the rebuilding rewiring of America. We have an opportunity to redesign how we live and make it better,

more livable walkable, as well as solve the climate crisis. It's a double whammy if we can do it right and that's sort of what I do as a day job, investing in companies, training entrepreneurs, matching mentors with founders just doing the work. We have 80 staff in 10 cities around the world and feel like we're contributing well to the solutions project.

Charlie ([05:21](#)):

And equity, right? Some might not understand how you connect buildings or green power and renewables back towards equity. I think you're showing that it's a global thing. I mean, here's what I experienced in the US and at the time of this recording recently, Texas and their grid obviously have vulnerabilities there. You've mentioned micro grid, and it's one of those where there's so much for us, the lay person to still learn, and you're out there in some other, even developing nations. Why solar at the time? Obviously you have spent a lot of time in solar. You obviously still have a hand in it. Maybe you also invest in companies related to solar. You mentioned batteries. Are you seeing it improve and you really have a lot of experience there.

Danny ([06:04](#)):

Yeah, absolutely. I've been involved for a long time and wrote a book back in 2012, A Circle, Rooftop Revolution. I think solar is the winner take all kind of story in the energy transition that sounds a little hyperbolic. There will be other stuff around the edges, but even the international energy agency last year in 2020, confirmed that solar will be the "King of electricity", was the quote unquote. By the end of this century, just 80 years from now, we will have a situation where all of the terawatt hours on Earth and they will be many more consumed per annum. Most will be generated from photovoltaics. Like there's just no question that flat plate semiconductor that when you shine light on produces electrons is going to become ubiquitous and go to scales that we don't even contemplate today.

Danny ([06:53](#)):

I'm not talking about replacing peak demand or peak capacity that we have in the system. I'm talking about many times greater because the thing will be so cheap we will just put it on everything and use electricity for all sorts of stuff we didn't think we needed electricity for. Mobility being the first segment of the economy that will be electrified, but ultimately we will electrify everything because the abundant low cost electricity that photovoltaics plus wind will allow. Batteries are

a necessary step. They're a critical technology to enable that vision. We do a lot of work with batteries. We just had an exit yesterday from one of our portfolios in California with a company that was acquired by North fault, a company, we put money into in 2017 called Cuba, and then helped out last year with some testing at Lawrence Berkeley National Lab.

Danny ([07:44](#)):

They're going to be key pieces of the puzzle, but the big story is a Solar Powered Civilization, a few decades hence. The abundance that also is actually really kind of interesting for your audience of architects and designers. What happens when the skin of every building is generating surplus palate to the requirement, for example. What happens when the sidewalk is conductively charging the cars, driving over it, if we still have cars. The mobility systems and platforms we use to move people and goods around, that's where we're going. I truly believe.

Charlie ([08:18](#)):

I can tell Danny, part of your job as a futurist a little bit and then as an investor too. So, that's kind of a good segue to my question. Set aside solar, what else is around the corner? If you had a crystal ball, what are you reading up on yourself that you think is coming in this kind of sustainability world?

Danny ([08:34](#)):

I think the big thing that we're not paying attention to is the shift in geopolitics and demographics. The fact that by the end of the century, again which is, it sounds like a long time away, but it's kind of two, three generations. Some of the listeners on this show will still be alive then, just to put it that way. I won't probably, but many might. In that time, Africa will become the largest population in terms of a continent. That's 54 countries in that place. We call Africa even exceeding China and India combined which is a remarkable statement that Asia will be eclipsed just because of birth rights. We know that now that's built in. We don't tend to think about what's required in the mega cities of Africa, but places that you and I barely know the names of Kinshasa or Kono. These cities are going to become the largest cities in the world, and they're going to be the most productive culturally and economically in the history of humanity.

Danny ([09:37](#)):

What are we doing about that? As the United States sort of plateaus, if you will, it's demographics being interesting, given problems of immigration and racism in the country. If it doesn't grow, what's its role in the future of the demographics. Other geopolitics, I think to keep our eyes on is the fact that China has asserted itself on the world stage in the last decades. It has come back to the main of history which is that it was the, the middle kingdom, the center of the world. It will eclipse the United States as an economic power in this decade. I mean people don't get that, but the economist did a great cover a couple of months ago that suggested China would be bigger by dollar value than the US by 2028, at least.

Danny ([10:24](#)):

So, that's happening. Meanwhile, many of our kinds of conventional perspectives and thoughts about countries will change dramatically, partly because of the energy transition. Oil States will fail just as coal States have failed in the last decades. What's happened to Venezuela may happen to Russia which is a weird thing to contemplate. Saudi Arabia, I hate to say it could be all over Red Rover because it's dependency on this inheritance that had oil under its feet. It's not going to be as useful to it as it was once. Where we position ourselves and how we think about all that obviously that's some time out, but it's going to come faster, harder than we think. The rate of change and again, this is back to the energy markets that I've fixated about electricity and mobility services.

Danny ([11:17](#)):

They haven't changed for a century or more. We did steam boiling with the provinces, invented in the 18 hundreds, and that's what we did. We built out grids and we served countries that way. And now we're generating it at the point of use and we're stitching everything together in these smart grids and it's being stored in our cars and arbitrage. It's a very different network model and that disruption is going to be complete this decade and dissolve those legacy institutions that grew up around the steam boiling technologies and the internal combustion engine. Anyway, at the end of the lesson, I'm sorry to lecture the audience, but I think we're up for a fascinating time when you asked me about the crystal ball.

Charlie ([11:59](#)):

Thank you for that. We don't talk about that enough. Sometimes we're thinking just five years ahead if we're lucky. It's good to really zoom out and be like, "No, there's a shift that's happening. The indicators are there." I agree with those

realities they're coming. A lot of the audience, we deal in buildings, sometimes it's a whole community, maybe it's a 50 story skyscraper, maybe it's a new school and a local community, but LEED and green buildings. Now, healthy buildings. You're well-traveled, what markets do you really see they're getting it right with buildings. They are getting it right with a smart grid, they're getting it right with solar. Are a couple places that you really seen and it might not be the US but where are they getting it right?

Danny ([12:42](#)):

Yeah. I mean like there's clearly places in the States that do it, whether it's at the local specific level buildings, like the Bullitt Center, Seattle. I went and saw it once and had my mind blown. Here's a net generative building of water and energy. It's fantastic to see six stories tall timber structures. So yes, there's good examples in the states, which were probably covered before. I would say in my travels, I love what I see here in Sydney. There's a lot of great stuff. I think one of the things is the neighborhood level and I know that's becoming a design concept, more focused on by the LEED practitioners and others in the States too. The sort of whole community approach and investing in infrastructure around the built environment so that the buildings work better in situ and in context of the community. We've had the benefit in Sydney in the last decade of investing in two public transit systems to add to the already existing substantial bus and train networks.

Danny ([13:45](#)):

They've built a light rail system of note, and they've built a Metro and it's expanding rapidly. A beautiful city of 5 million people on this edge of the Pacific. It's just like the common good because the knitting together and the need for no cars is just transparent because you can get everywhere by public transport or bike. They've also done popup cycle ways during the COVID period, that's really transformed the cityscape at the ground level and in turn, has transformed the buildings. I can say that because the city's open for business right now, it's not shut down to Covid and it's quite thriving and fun to be here. I can say the same about Shanghai and Beijing. I mean, their investment in public transit they built hundreds of Metro stations, both those cities over the last couple of decades.

Danny ([14:33](#)):

As a result on the street level, going into better buildings, using modern technologies and design features, you really feel like the whole system works for the user, if you will. The livable, walkable city concepts from the building on. Anyway I'm waxing lyrical a little, but I love what we're seeing. I think this is a kind of Renaissance time. You and your elk who have trained, designed, developed these standards, these technologies, tools and design elements are gonna be sitting on a big cycle of reinvestment in the cities of America. It's this opportunity to get it right with all we've learned over the last century about the mistakes we made with buildings and sprawl. All the stupid mistakes we did setting out our structures around the footprint of cars, which was just madness in America, which we've really got to get past and do right now with the livable walkable cities that we can build with the technology we've got today.

Charlie ([15:39](#)):

That's great. The end of your statement reminded me of an inconvenience sequel or there was a conversation between Al Gore and Moti, "Hey, you're saying the US it was okay for you to build dirty, and we can't do that." These superpowers and these large countries that they've gotten developing populations and they need to build, but can they do it all in the best way. There is this mix, this hybrid approach. Let's talk about your nonprofit, and I want to ask you about a couple of taglines, New Energy Nexus, an international nonprofit that supports clean energy entrepreneurs with funds accelerators in networks. Actually before we started the podcast, you're talking about the connecting and the networking. Tell us what you enjoy about your day to day and a little more about New Energy Nexus?

Danny ([16:31](#)):

I just love meeting founders of teams that have had some sort of aha moment. They've got an insight, some better technology, better ideas about doing a business that's important to humanity's survival and they are struggling to form their company, product ties, and their insights. And then scale that by finding a product market fit to a customer set and then selling it repeatedly and making profit. That's the trajectory. We try to take them on from Eureka to exit, we call it. It's a wonderful day job to be helping and supporting startups to do that. Truth be known, my job is more about supporting the people that support the startups. I work with a staff of 80 resources and work with them to succeed at their craft, which is this unique role in the world in the country, in cities supporting cohorts of startups coming up in this space.

Danny ([17:32](#)):

It's a lot of fun. As an example, last night, we had a networking event at an energy lab that we're affiliated with here in Australia and met a couple of entrepreneurs. One doing a better lithium extraction process from foraging minerals that is an important part of the battery. Advanced battery manufacturing needs of the world to scale electric vehicles. We don't have enough lithium solutions so these guys are cracking that nut in terms of the chemistry. The next kid was doing a really cool sort of weather forecasting service, 15 minute interval weather. As you increase penetration of renewables in the grid, one of the problems is the ramp times up and down as the variable renewables hit the system. These folks can sort of forecast with fairly high granularity, "watch out, operator you're about to be hit by a big swag of sunshine because the clouds have grown apart or there's a wind storm coming that's going to turn the turbines faster." Whatever the story is and open up your batteries or let the pump hydro store some more energy because there's more power or there's less coming and you're going to have to discharge the batteries. It's just like fantastic to sort of meet all the people, making all the stuff in the background happen and find them money, find them mentors, find them what they need to succeed.

Charlie ([18:54](#)):

That's fantastic. It does sound like a fun job. It's international so you've got a staff, you mentioned, in different cities around the world. Can you mention those again? They vary a little bit, of course by region.

Danny ([19:22](#)):

Absolutely. I think we're the world's largest network of organizations devoted to supporting clean energy entrepreneurs like this. We're in Manila, Philippines, Bangkok, Thailand, Hanoi, Vietnam, Jakarta Indonesia and Singapore. Big commitment to Southeast Asia because that's like 700 million people, very aspirational growing like a weed. Urbanizing doing all the things we've talked about and the rest of the world quickly in that part of the world. We're in Shanghai, China, and Chengdu also with an incubator. Their more around heavy industry India. We partnered with an organization called Climate Collective and a fund called seekers around the solar sector. We have a program in Uganda, Kampala, the capital city based out of, but really in the community. To your point, that things can be very different in different places. In Uganda, we're working with the base of the pyramid on Chicanas. Women mostly that we train to sell solar



lamps to replace kerosene solar home systems, to get some electricity into the families that use cookstoves, energy efficient water heaters, and water filters. I should say that it's in communities where it's \$2 and \$3 dollars a day existence. We have a micro financing lending license there to help those entrepreneurs succeed and grow their businesses with that finance support.

Danny ([20:28](#)):

In the States, we're in California having a very big program. There was not a whole pipeline approach to supporting startups. We've done about \$100 and \$150,000 there about investments over the last four years in companies to meet the California energy goals on behalf of the California energy commission. That's called Calseed.Fund. If people want to check it out, and then we also run a count test bed initiative, which might be interesting to your audience in that we place startups with prototypes on campuses in a UC system, university, California, and do measurement verification exercises to try to help prove the concept and prove that the widget does what they say it will do. They have put about 26 companies through those paces last year, and we'll do the same this year. The last, but not least is our clean fight in New York, which is the most relevant probably to the audience on your show, Charlie, which is all around the built environment and de-carbonization goals, New York set itself pretty aggressive DeCalb around 2025 mandates without much of an energy efficiency industry to speak of. What our job is, is to help commercialize technology into the New York market, whether it's a New York startup, like BlocPower is one that's had a lot of attention lately we've been backing them or bring in companies from outside New York that don't have a footprint there, but have a service or offering that we think would be useful to the landlords and the rates and the operators of the buildings there. On the first cohort of nine companies, you can check it out at the [clean fight.com](#). We're more class A building oriented, I would say.

Danny ([22:01](#)):

Next we'll probably be tackling the BNC buildings. We'd love to work with you and your listeners. I'm sure Kate and the crew at Clean Fight would love to sort of get more involved because the model of acceleration that we pursue is very much around an ecosystem approach. Yes, money that's important where we can we bring but the corporates that are the off-takers for the goods and services are just as important. Learning how to sell into a big conservative real estate organization, or how to serve as the sustainability manager of a large corporate that's got an

ambition to clean up the headquarters but doesn't have the muscle to do it internal. Working on those timelines on sales cycles is hard for an entrepreneur who's scrapping it together and living on ramen noodles. We've got to help them with all that and introduce them to resources that can make them survive and thrive in that sort of new environment as they grow and scale.

Danny ([23:00](#)):

The Clean Fights very much about the businesses that are already at revenue in one market that we're trying to get them to crack into this new market. Last but not least, I will mention one other program we jointly manage with Rocky Mountain Institute, but again, would be interesting to your listeners. It's called Third Derivative, and it's really our test or effort to get to the real hard tech stuff like climate tech is not done. We know solar will be deployed at scale. As I was saying earlier, that's a finance innovation problem, as much as a technology problem nowadays business model. There's still a lot of things we've got to invent to get industry steel, cement sorted from a climate point of view. Third derivative is all about that. There's a lot of building technologies. I have a team assessing and supporting 46 startups in that cohort currently, and probably hundreds to come. A rich ecosystem model where we put in a hundred thousand dollars to the companies that we've selected, but we also pay them with Google and Microsoft and Wells and Berkshire Hathaway energy, and some big end of town players and a bunch of really great investor partners. Lots going on too many things to say, but hopefully of interest to your audience

Charlie ([24:13](#)):

You've really shown that green isn't just good business. It's great business. It's here you are all these good ideas. To the listeners, previous podcasts we've talked about even intrapreneurship, within a large architecture firm. Maybe you have this research you're doing on your staff and you need to reach out to some of these resources that Danny has mentioned. It just makes sense. New York, of course, with its carbon laws, local law, 97, they're just big push penalties for large buildings in the city. For California, where you're usually based. Of course, we've had Matt St. Claire with the University of California education system recently, but even damper going on policy. We want all electric buildings. We've got to make sure our existing buildings get retrofitted by 2050 up in New York but the 2025-2030 penalties they're coming.

Charlie ([25:02](#)):

Those are some of my main clients, these large buildings, these large companies in New York. If someone were to have an idea, you've got some resources, but there's probably even others out there. As we start to wrap up here Danny, I really enjoyed our talk. If someone has a startup, at what stage are they maybe meeting with you, or even some of the other resources they need to be? They have to have revenue. They need some staff. At one point, maybe do you give them that injection and then you really connect them. What do you say?

Danny ([25:32](#)):

It very much depends on what kind of thing. In some places we focused on the sort of ideation stage, sort of what I call zero to one or zero to 0.5 just to have a hackathon and see what you can come out with. Idea generation others are more about the one to 10 phase or the 10 to a hundred kind of thing. Nationalization down the valleys of death. We call them forming the company, productizing the inside, proving that it works and it has value for customers and then repeatedly selling it to customers. All those steps are unnecessary. We have tools in different places to address them. I mean if listeners want to just play in the space, one suggested bankers to join our Slack community. It's free and open.

Danny ([26:17](#)):

There's about 3000 kinds of entrepreneurs and others kicking the tires in this space. There's conversations about business ideas, there's people looking for partners or co-founders. There's jobs being advertised a lot so that's a rich place to have a conversation. Otherwise sign up for our newsletter. We do a monthly here's a prize, a business plan competition, hackathon being hosted by New Energy Nexus or some other partner somewhere, somehow in the green building scene. We definitely cover the clean side nationwide so you can do all those things and sign up for our newsletter and get involved in the Slack. It's a bit of a horse for courses Charlie, but I do think we've got to create more avenues.

Danny ([27:07](#)):

Our goal is to sponsor a hundred thousand entrepreneurs to succeed this decade. Sounds kind of crazy because we currently dabble in the hundreds, but that's the scale of change we're talking about. I appreciate your point earlier about intrapreneur. The joke I often make is that the only thing harder than being an entrepreneur is being an intrapreneur. Working out through the ranks of the big

corporate and the big architectural firm and all the stuff that's hard yards, as far as I'm concerned to make change in that world, but good on you if you can. Maybe that's something we also need to think about is what tools can we provide? We have a lot of online resources. We have videos you can watch, we've got all sorts of stuff. So maybe we need to do a whole track around entrepreneurship, as well as the home ownership and those that we support.

Charlie ([27:52](#)):

This is fascinating. We're going to put links to everything you've mentioned. Somebody could follow up, but I can tell you really enjoy what you're doing. My last question to close on is a fun one bucket list. I'm a fan of the bucket list. You're well-traveled, maybe there's some travel adventure on a post pandemic time, or you've already written a book and you've already said, "Hey, we're going to make sure we have a hundred thousand green entrepreneurs", but what's on the bucket list?

Danny ([28:19](#)):

It's funny, perhaps I'm too lucky and privileged to have traveled to many good places and seen a lot. My thing is actually wanting to be rooted in place. My heart's desire is to know a place well, and by which I mean more nature or the environment of the place. I mean, that could be a city. I have a particular patch of Bush here in Australia, some coastal tracks in California that just make my heart sing. I want to spend more time there rather than just moving onto the next thing and the next place. If this question has inspired me to do anything, it's just book my next week, staycation, when I get home to California and then enjoy the redwoods.

Charlie ([28:59](#)):

I want you to do that. Danny, it's been a pleasure today. To all the listeners, we'll make sure you can connect with Danny and his team. Thank you so much. I really enjoyed our talk today. Well, thank you and thanks for your work. I just want to say thank you to our loyal listeners. We actually are celebrating one year here on the Green Building Matters Podcast. Me and the entire team were stoked and just so glad to continue to listen every Wednesday morning to a new interview with a green building professional here in this industry, or just some pro tips that we want to make sure that you are getting straight from us straight to you. Thank you for listening to this episode of the green Building Matters Podcast gbes.com. Our

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