

Digitization, decarbonization, and electrification: A conversation with CLP Group's Austin Bryan

Energy represents one of the last major economic sectors to undergo digital disruption, but massive change is under way. The key to providing sustainable solutions such as energy as a service is a company's willingness to embrace ambiguity, risk, and discomfort, according to the head of innovation for a Hong Kong-based regional energy supplier.



In this episode of *The Venture*, we share a conversation with Austin Bryan, senior director of innovation and ventures for CLP Group, a Hong Kong–based regional energy supplier. Austin discusses with McKinsey’s Andrew Roth his commitment to transforming a 120-year-old company through digitization and decarbonization into an innovative provider of sustainable energy that helps customers reduce consumption. At the close of the interview, McKinsey’s Gisa Springer offers her insights on the challenges and opportunities for business building in the energy sector.

An edited transcript of the podcast follows.

Podcast transcript

Andrew Roth: From Leap by McKinsey, our business-building practice, I’m Andrew Roth. Welcome to *The Venture*, a series featuring conversations with legendary venture builders in Asia about how to design, launch, and scale new businesses. In each episode, we cut through the noise to bring practical advice on how leaders can build successful businesses from scratch.

Today I’m excited to welcome Austin Bryan, senior director of innovation for CLP Group. Austin joined CLP in May 2016, leading the group’s efforts to develop innovative business models as decarbonization and digitization opened up new opportunities in the global energy market. In this conversation, we talk about how he launched the traditional utility player on a path of innovation and sustainability. He shares with us how an organization can build sustainability into its key strategy, promote a culture of innovation, and reinvent itself for the future. There’s a lot to cover. Welcome, Austin. Great to have you on the show.

Austin Bryan: Thanks, Andrew.

Andrew Roth: There’s so much innovation happening in the energy sector. Before we dig into how you see the world and what’s on

the horizon, tell us how you got involved in the industry.

Austin Bryan: My journey to the energy sector began by way of the telecommunications sector, experiencing disruption through the move to digital content and all the incredible digital economy changes that have taken place over the last 15 to 20 years. I viewed energy as the only economic sector that hadn’t yet been digitally disrupted, and I combined that insight with a sense of higher purpose. I was really keen to be a part of that change—the digitization of energy—providing instant, ubiquitous access to it.

Andrew Roth: It sounds like you’ve had a career not just digitizing an incumbent business but taking it to the next level of innovation and business building. For energy, how do you frame the future when it comes to sustainability and innovation?

Austin Bryan: Compared to other economic sectors, the energy sector is facing a seismic shift from a traditional one-way generation, transmission, distribution, and retail model to ubiquitous access for a multifaceted world where you and I are independent producers and consumers of energy, much in the same way that we now live and breathe digital content through our various devices. That’s a massive journey, underpinned by the need to create clean, lower-carbon, more efficient electricity that’s available anytime, anywhere and ultimately transportable in a way that gives control to businesses and consumers. That’s a very different world than the one that existed 120 years ago when CLP was founded.

Andrew Roth: You mentioned ubiquity. What does that mean from a customer or even an incumbent perspective?

Austin Bryan: Today, if you look at electricity from a social responsibility perspective, people increasingly want to understand how it’s produced, where it’s produced, and its carbon intensity. Anytime, anywhere, ubiquitous

access to information and the transparency of that information is important for individuals and, increasingly, for large organizations that want to be socially responsible and pursue a sustainability strategy. That's something you need to understand and be able to articulate to your shareholders and customers.

Andrew Roth: Sustainability is no longer just a thing to do on the side. It's becoming central to everything you do. I recently spoke with the CEO of White Peak, who operates residential real-estate complexes in China, and he believes that if you don't have a clear, transparent sustainability strategy, you won't be able to do business. That's how serious it's getting.

Austin Bryan: I think it is. I think there's clearly an increasingly sharp focus from shareholders. But large organizations can no longer simply rely on platitudes and aspirational statements in the sustainability section of their annual report. Scrutiny is intensifying around corporate efforts to transform their energy consumption, so they need to demonstrate an awareness of the carbon intensity in their organizations, logistics, supply chains, and procurement processes and then lay out specific and clear solutions to reduce that intensity. For the energy sector, the transformation over the last few years has been away from, "Will I generate, transmit, distribute, and retail energy?" to "I am the embodiment of what people are trying to become as a sustainable organization in the way that it operates, as opposed to how it aspires to operate."

Andrew Roth: On that note, a lot of organizations are trying to figure out how to digitize the core business, what adjacent businesses to move into, and what new markets they can disrupt or enter. Can you walk us through how you're seeing those three parts and share a story on a specific project or endeavor you've embarked on?

Austin Bryan: If you look at the energy sector, the first priority is the optimizing of assets to make sure they're digitized, transparent, and visible. You also need an awareness of the way they perform at peak efficiency. The other side

of that is the penetration of new markets that materialize during that process, as you identify how to become inherently digital, decarbonize, and electrify yourself. Then there are the adjacencies that arise, which for us included the energy management of buildings. Property developers today think about their projects in two ways. One is how to demonstrate they're sustainable, which for them is a fundamental shift in the way buildings provide information. The other is providing everyone involved, from residents to facilities management, with control options and choices around energy intensity, carbon intensity, and energy utilization.

That's the task for many companies today, making their asset base practical and engaged in a sustainability strategy. We do that with a digital energy platform we've created called Smart Energy Connect. It's a platform that offers energy-efficiency solutions for residential, small and medium-size enterprises, large corporates, property developers, and owners. We do this much like other economic sectors utilize digital insights to look at one-to-one and one-to-many solutions, anomalies, and information gleaned from artificial intelligence (AI) with machine learning.

Andrew Roth: You said two things there. One is that you're reducing carbon emissions yourself as a core business. The other is that with Smart Energy Connect, you're trying to help others, especially in real estate or in commercial buildings, which are one of the highest emitters of carbon.

Austin Bryan: For example, I live in Hong Kong, where buildings account for 90 percent of energy consumption and 60 percent of the CO₂ emissions. So there's a strategic imperative to reduce the energy consumption and the carbon intensity. Now, for a traditional utility without a 21st-century mindset, reducing electricity sales seems counterintuitive. The answer lies in adjacent markets, because if you don't, a software-intensive, asset-light organization is going

to come in and disintermediate and disrupt you, grabbing those revenue streams. That's why companies are facing tough questions from shareholders like, "Do you have authenticity to be in that space? Can you offer solutions in that environment?" For us, we make it clear we want to help customers reduce electricity consumption and carbon intensity through 21st-century solutions of digitization, decarbonization, and electrification.

Andrew Roth: In terms of Smart Energy Connect as an asset-like platform, if I own 100 commercial buildings in Hong Kong, what are the typical benefits or savings?

Austin Bryan: They're pretty exciting. You're looking at a 15 to 25 percent reduction in your operating expenditures. For example, we like to point to energy management in and around buildings, which is an adjacency. But if I look at new markets such as data centers, energy consumption is 40 percent of opex. We're all living with edge-based computing requirements, so data centers are experiencing exponential growth in the data they have to manage, move, and control. If I can help somebody who runs a data center by reducing their energy consumption and carbon intensity, that's a compelling argument.

But that's not what a traditional utility would do, because they don't understand how to move through the value chain and be connected. Also, these tools are coming from companies with software competencies, so how do you partner with them? How do you bring them into your framework? And how do you make them part of a joint value proposition that is coherent, cohesive, and executable? Those are the things that we've spent quite a bit of time on over the past few years.

Andrew Roth: It sounds easy on paper, but I would imagine it takes a huge amount of culture and capability shift to launch something like Smart Energy Connect. Let's dig into the practical steps on how an organization needs to do this, because it's all about speed. If you're not moving fast, you're going to get disrupted. How do you

change the culture? How are you talking to the board about making these changes?

Austin Bryan: The reality is that you have to first lay out the disintermediation you're facing. And if you're a sector that's facing digital disruption, you're facing a decline in earnings from your core business. The next question is, do you have the right commercial framework to engage in those adjacent solutions? Do you have the permission? Do you have the capability? Or are you attempting something audacious in which you have no competency? Board-level questions can include ones like, "Why should we be there? What's the risk of not being there? How do we be there authentically and sustainably?"

You're also cutting to the heart of your historical core competencies by saying, "These are new competencies that we need to graft into the DNA of the company going forward." That is a non-trivial piece of work, irrespective of whether you pick the right solutions and you have the right external-facing value proposition.

Andrew Roth: When you think about where you're heading, what kind of new capabilities are you prioritizing? Are you hiring data engineers and bringing new talent into the organization?

Austin Bryan: Absolutely. We're meticulously focused on that as a key area of success. We're asking ourselves how to bring in software development and enterprise architecture skills, people that understand intelligent apps as a graft into cloud-based services. We also need the ability to offer our services on multiple cloud environments with appropriate cybersecurity. We run on three different cloud environments in China and our other markets. So to make those solutions available, you need people who can write microservices, develop those capabilities, and use them to create energy excellence.

Andrew Roth: A lot of incumbents talk about converting themselves into a technology company. And I'm just curious, how do you approach where to play?

Austin Bryan: Ambiguity and pace are important. Today, for the energy sector, there's greater ambiguity regarding the future than ever before. So you may not hit the bull's-eye but maybe the next ring out. In an organization like ours, you need to let people know, "We have to be somewhat comfortable with the fact that we're not as clear as we used to be, but we'll work very hard to unpack that ambiguity, and we have to operate at a pace that's fundamentally different." That creates a constant level of discomfort. The trick is to make sure people are uncomfortable, but not too uncomfortable. You also need to ensure they don't become complacent. The challenge every day is to go home and say, "Am I constantly uncomfortable? Have I done enough to make sure that we're uncomfortable as an organization?"

And having said that, then you need to make very clear choices. We're focused on energy, infrastructure, and energy as a service. And if you believe that digitization, decarbonization, and electrification are the overarching themes driving us to actionable leadership around sustainability, then you need to ask yourself, "Well, how does that play out?" That entails a number of questions. What does it mean for a property developer to think about electrical vehicle (EV) infrastructure, vehicle-to-grid technologies, and building-to-grid technologies? If you want to develop a data center, how do you make yourself attractive to customers looking for providers publicly committed to making 80 percent of their energy renewable by 2023 and 100 percent by 2025? You do it by promising them clean energy with AI attributes that will reduce their consumption opex and demonstrate their carbon intensity in a transparent and authentic way for them to report using science-based targets.

Andrew Roth: I'd like to follow up on that ambiguity, because I think this is where incumbents can really lose time. It's that balance

between making an investment, taking a risk, and living with that level of uncertainty. What are some of the things you've learned over your career to engender more confidence in the face of ambiguity?

Austin Bryan: I've had the privilege of working for some very talented people throughout my career. One of them once said, "We're not trying to take less risk; we're trying to take more, better risk." I love that. Ambiguity doesn't excuse rigor. The approach we're trying to introduce is being as rigorous at unpacking the ambiguity as we are at focusing on the right choices—while remaining comfortable with the fact that it's very different from the typical risk mindset. Although we're not OK with throwing away \$100 million, we are OK with making specific plays on things we think will help us move into adjacent energy service areas, open up new markets, or fundamentally transform the way we operate. We're comfortable with the fact that we don't know everything, but you have to work very, very hard to know more every day.

Andrew Roth: In terms of being more rigorous, are you stressing how you do the economic sizing or economic viability of these new projects or talking to partners? How does your process introduce that type of rigor?

Austin Bryan: Most organizations today don't know the energy cost of all of their building infrastructure. So, when you talk about sustainability, you talk to the sustainability head, and if you talk about energy procurement, you talk to the procurement person. But when we looked at our building infrastructure, we decided to implement all of our solutions to show people how they work, and we have deployed solutions in all of our Hong Kong properties.

So now we can say to a potential customer, "If you want to see energy efficiency in action, let us show you the Science Park, our tech innovation hub." We have about 900

companies there and can point to a dashboard that displays energy moving in and around this environment, which shows them what it means to have visibility over your energy consumption. That allows us to be more authentic, using our own asset base before trying to install it for our customers. Because if you're not authentic and don't understand it, you can't sell it.

Andrew Roth: I love that. I mean, basically, your minimum viable product was to just implement it on your own real-estate assets.

Austin Bryan: Absolutely. Then you follow that through with the electrification of the transportation sector, which is another good example. And as you get more and more electric vehicles, you're going to have charging infrastructure and new ad hoc demands on the way energy is consumed. It's much like a mobile network and the way that we've consumed content over the last 15 years as network operators figure out pulsing demand. What's also exciting for the energy sector is that the seismic shift in the electrification of transportation and its implications for building owners is as important to us as it is to them. So energy as a service is something we look at very seriously.

Andrew Roth: So you're saying market demands to become carbon neutral are only increasing, and the private sector may be accelerating past the regulatory goals. Now that you've turned your own real-estate assets into an R&D test bed, are you starting to do that for other sectors like energy as a service?

Austin Bryan: That's absolutely the case. And if you look at large property developments or industrial parks, they are effectively mini networks where people can actually come in and be a part of that environment more economically, because there's visibility and transparency around how heating, cooling, electrification, or charging infrastructure is

available and shared. And that energy-as-a-service and energy-infrastructure play is going to be something companies increasingly come to grips with and will benefit from if they understand how they want to play in that space.

Andrew Roth: What are some guiding principles you might share with someone in a completely different industry facing a certain amount of inertia when it comes to change?

Austin Bryan: When it comes to the ambiguous notion of innovation, you have to be clear and define it for your organization. For us, it's about the creation of future earnings streams that are sustainable and viable going forward. It's also embracing the disintermediation and disruption facing your sector as a result of digitization, decarbonization, or electrification. First of all, don't do innovation theater; don't tell people that you have a process or that you're agile. If you can use those things to enable a business outcome, good for you. But if your goal is to create capabilities that enable a business outcome, you've got it the wrong way around. You need to be clear that you're trying to create future earnings streams for the company, trying to create new capabilities, and trying to access new markets or attack adjacent areas.

The conversation also needs to demonstrate rigor. Why do you believe your company can move into a given area? Is it buy, build, or acquire? Does it require a partnership? If so, how good are you at partnering? For example, we've vetted more than 1,500 companies in the last four years that were in the start-up or scale-up phase of energy management, energy efficiency, and artificial intelligence. Now, a traditional nondisclosure agreement (NDA) in our environment might be 20 pages long. But we use a simple, two-page agreement that we can turn around within 24 hours, one that fosters intelligent conversations we can either shut down or move forward on quickly.

Also, pilots in the energy sector used to last 18 to 24 months, which we've now gotten down to 90 days. For start-ups and scale-ups, speed to revenue and speed to annual recurring revenue is mission critical. I also think it's really important that you look practically at what you're trying to accomplish. Don't just say, "I looked at 1,000 companies." Say, "I looked at 60 companies, am implementing 11, and may invest in several of those. Because, A, we can use our technology; B, we think it's going to be a winner in our sector; and C, we can help them grow where we have capital and a presence."

Andrew Roth: What do you see as the major challenges once you decide where to play? Are you looking at building more on your own? How are you balancing the portfolio?

Austin Bryan: I think most incumbent organizations in almost every sector are presumptuous and arrogant to believe that they can build stuff. There are fantastic solutions available today. We have scout and scan capability in the United States, Israel, Europe, Australia, and China and have a filtering process to find the best and most interesting companies, which we then rigorously assess for their ability to work with us. Critical questions in the partner-selection process include: Are they aligned with your values? Do you believe that they have sustainable innovation? Do they have protectable intellectual property? How do you plan to execute in a partnership? How is that structured, both from a commercial and an operational execution perspective? Can you prove it's sustainable? So if you know you don't have the competencies inside your organization and you tell your organization you want to build them up, you should appropriately face some very, very tough questioning.

Andrew Roth: As you're scanning all the different markets, if you don't find a partner ticking all those boxes, I would imagine that sometimes you just have to build.

Austin Bryan: Yes. While Smart Energy Connect is a platform for us, it's also a cloud-based

environment for companies that offers a framework and tiers of deeper integration with our services. We offer domain knowledge, energy information, data, and insights from operational energy assets, which we mix with a software solution provider to create value. So while we created an environment where we could rapidly onboard, both technically and commercially, we didn't build software solutions. That's especially critical from a cyber perspective, because everything we're doing with sensor-driven awareness is exponentially increasing our platform threat risk. This is new to the energy sector, and smart, sustainable, connected cities are major potential targets for those who wish to do harm to society.

Andrew Roth: Any final tips or principles for someone facing a bit more internal friction when doing the scout and scans, or anything that's guided you over your career?

Austin Bryan: I think the one thing that I try to constantly remind myself of is that in a role like mine, you have an enormous privilege to help an organization orchestrate change. And with that privilege comes an enormous obligation to demonstrate your rigor and attention to detail. It's not grow fast, fail fast, have fun. This is work hard, be diligent, be disciplined, and put forward the best-informed choices that are available in the environment and be prepared to defend those well. You also need to stand up and be accountable for any consequence and be unafraid, whether it's a \$5 million or \$500 million investment in a company.

Andrew Roth: So it's a much different playing field for the incumbent, where you need to introduce that rigor that you've been highlighting throughout the conversation but also the speed that goes in parallel to that rigor.

Austin Bryan: When you get it right, validation comes once large parts of the organization start leading by example, embracing change,

and advocating how and why these things need to get done. When it becomes pervasive in your organization, you know it has some grounding. If people are uncomfortable with some ambiguity and uncomfortable with a faster pace but are working hard and embracing it, then you're moving in the right direction.

Andrew Roth: These are such important topics we've touched on—what's happening in the market around sustainability and what kind of internal changes need to be made in order to reach these goals. Thank you, Austin, for talking about them with us.

Austin Bryan: Thank you so much, Andrew.

Andrew Roth: In this segment of the episode, we invite founders and experts from McKinsey to provide more context and insight to our interview. For our guest today, we have Gisa Springer. Gisa co-leads Leap by McKinsey in McKinsey Europe's global energy and mining practice, and she has helped traditional industries in energy and materials build their corporate innovation engines. Gisa, welcome to the show.

Gisa Springer: Hi, Andrew. Thanks for having me.

Andrew Roth: Austin talked about how incumbents need to take different steps to decide where to play in business building. He talks about being more comfortable with ambiguity and a different pace and process for partner selection, specifically around venture building. What stories or tactics have you seen around this in your experience?

Gisa Springer: First, it's important to remember that when we talk about new-business building for incumbents, especially with adjacencies to the core, it's no longer really a choice—it's really become a necessity for them. The reason I say this is that in multiple sectors, the rise of new venture-backed start-ups has placed

incumbents' established business models under a lot of pressure. One proxy for that is the creation of new unicorns, and we have seen exponential growth in unicorns over the last couple of years and, attached to that, mega-funding rounds of \$100 million or more.

That has shifted the idea of value creation from the incumbents—companies that are roughly more than 30 years old—to new ventures, or younger companies. What that means for established businesses, especially in mature markets, is that new business building is really an avenue to new growth. And some of them have realized that. It's particularly pronounced in the energy sector, which is where both Austin and I spend a lot of our time and where traditional and upstream oil and gas business models are under unbelievable pressure. There is a real need to replace these lost revenues—and quickly. This is a lot of the impetus behind the need for business building in the first place.

Once incumbents understand this, then the question becomes, how do you go about identifying the one adjacency or the one new business model that you really want to play in? Determining that is very much both art and science, but it comes down to understanding the market opportunity. Is there really enough headroom to create a billion-dollar business quickly, over the next five to seven years? Will it have the potential to really disrupt the industry—is the business model so new and innovative that it really brings something new to a whole set of established players and business models? And are you going to achieve this with partners or an ecosystem that's actually relevant to you and that you can tap into, or will you build it from scratch? Either way works, but it's an important consideration at the beginning.

Andrew Roth: The pressure of value creation from the unicorns is both a forcing

mechanism to evaluate where to play, with the different criteria you listed, but sometimes also the answer. If you look at the unicorns starting from scratch, many incumbents already have the right partners, capabilities, capital, and branding, and it's just a matter of deciding to jump in.

Gisa Springer: Yes, and it's an opportunity to really bring this advantage that they have, of having the corporate mothership, which already has intellectual property, brand, distribution—they can bring all of these advantages to new ventures in a way that allows them to operate at pace and really tap into resources that, quite frankly, every stand-alone start-up would kill for.

Andrew Roth: Specifically in the energy sector, Austin talked about timelines for sustainability and moving toward asset-light business models, offering energy as a service and creating a platform driven by analytics and new digital capabilities. Does that platform or asset-light business model work for other industries, too?

Gisa Springer: There is certainly something there, but we will have to see how the emerging trends in sustainability play out. Carbon transparency is a massive issue for all of the energy players, but the jury is still out for how you actually go about it. What is the business model that you can use in order to, in a very standardized way, measure your carbon footprint? It's increasingly important for any business to take tangible and measurable actions to address climate impact, and yet there is no single standard in which to really build a successful business model to do so.

Another trend we're seeing is dramatic growth and an increasing appetite from corporate buyers to procure renewable energy and enter a new energy sector. This extends beyond the early adopters to the industrial sector and very often to educational institutions as well. An asset-light model makes it easier for them to really enjoy the platform benefits of this business model and lowers the bar for them to enter and really put money behind it to drive growth.

Andrew Roth: Austin also talked about engendering a start-up team culture, and how to not just do innovation theater, as he called it, but to actually create authentic culture. This seems to be one of the toughest areas for incumbents. What are you seeing in your experience?

Gisa Springer: This notion that it all starts with culture is a really good one—you bring in the right people, you create the right setting for them to really operate at their best, and then good things follow from that. But how do you actually go about doing this? It's very important for incumbents to align in the beginning on the question of what it is they are trying to create—what is the set of values that team members are all striving to go after? The idea of purpose has become a big factor in decision making, not just for the younger generation, but for a lot of the entrepreneurs out there trying to create the next generation of unicorns. That's where it starts. You need to create a set of very clear values and clear direction for where you want to take this business.

And then you need to combine it with an operating model that allows these very gifted talents to operate at pace and to not be slowed down by the corporate burden on the other side of the house. The operating model needs to be combined with a governance model that enables very quick and autonomous decision making by the team building the new business. It's a triangle of values, operating model, and governance, and one enables the other. It's about bringing those three elements together to create the right environment for great talent to not just succeed but flourish.

Andrew Roth: The team needs to emulate the different rituals from leadership, doesn't it?

Gisa Springer: Yes, it does need to come from leadership. Also, the team needs to be

trusted and given air cover from the senior-most level within the mothership, who should say, “Go test things” and “Move at pace,” and “If you create noise, that’s great because that means you are doing something new.” Maybe what you are doing runs counter to what has been done for decades, but it will allow you to reinvent your business. It can be a difficult balance to strike sometimes, because with

autonomy comes the need to relinquish control. You are making these teams more autonomous, more flexible and giving them more decision-making power, and that is an interesting place for a lot of corporates. It’s still a work in progress for most of them.

Andrew Roth: Gisa, thanks so much for sharing some of your perspectives.

Andrew Roth is an associate partner in McKinsey’s Singapore office, and **Gisa Springer** is a partner in the London office. **Austin Bryan** is the senior director of innovation and ventures for CLP Group.

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