

STRATEGIC COMMERCIALIZATION LEVERS FOR ENERGY STARTUPS

Vertech Capital

Energy innovation systems are under the spotlight.

The pace of innovation in the renewable energy industry has been slow, undervalued and underinvested. One of the barriers that has been highlighted and discussed by KPMG and World Economic Forum¹ is the collaboration required across public and private sectors to propel nascent technologies to maturity.

However, beyond the macro initiatives that heavyweight stakeholders can participate in, there is a need to get to the next two levels of detail by assessing what can be done for startups from ground-up to help drive commercial success for new-to-market innovation.

It is clear that the energy innovation industry is yet to be defined by a north star use case that has achieved the delicate balance between breakthrough innovation, market traction, and lean operations. For startups, finding the middle ground between scale and innovation rides on the ease of access to capital flows. From Bill Gates-led Breakthrough Energy Ventures (BEV) to National Grid Partners' VC arm, the global race to accelerate the energy transition is on, but commercialization efforts remain largely fragmented.

Relative to other industries, scaling renewable energy technologies into the marketplace is complex. The high CAPEX, OPEX and dependency on energy market structures have resulted in a slow state of commercialization of innovative technology.

On one end of the spectrum, incumbent energy conglomerates pump in millions of investment into digitizing their core business and service lines, by bleeding corporate colors onto the innovation agenda. On the other end, resource-strapped startups prototype and launch innovative technologies into the market, but struggle with scaling beyond early adopters. The gap between the two polarized extremes can be bridged by accelerating the growth and reach of energy innovation startups.

Here is our take on some of the most common challenges faced by energy startups globally and pathways to beat the sluggish innovation environment.



1 OVERCOMING FRAGMENTATION IN THE COMMERCIALIZATION JOURNEY

The renewable energy space is a particularly tough one to crack with long development life cycles. Energy storage innovation, and heavy industrial and manufacturing technology that reduce greenhouse gas emissions, require 10 to 20 years of R&D and early market validation before they see the dawn of light that is the go-to market journey.

A quick look at plug-and-play solutions such as low-carbon smart building materials, electric vehicle charging technology, and microgrids tells a different story. Plug-and-play solutions have been moderately successful in gaining traction with users as the limited amount of customized implementation enables rapid speed to market.

However, the result is a clear disjunct; the renewable energy industry is at a state of limbo. The plug-and-play space is a red ocean market, saturated with numerous solutions and few use cases.

The blue ocean market is left largely uncontested as new solutions require longer development lifecycles with higher R&D, customization and integration timelines, leaving them 3 steps behind the rest of the innovation curve.



The renewable energy industry is at a state of limbo.

*Current state of energy technology :
Red Ocean Strategy*

1. Compete in existing energy industry structures and with existing incumbents
2. Beat the competition through incremental savings in capital or operational expenditure
3. Exploit existing demand for clean energy generation, efficiency, or storage from energy monopolies
4. Make the value-cost trade off by prioritizing lower cost product R&D as the energy innovation space becomes crowded
5. Focus on strategic choice of differentiation by investing in energy technology that can easily be duplicated, such as generation hardware and sensors

*Required state of energy technology :
Blue Ocean Strategy*

1. Create uncontested market space through by observing unmet needs of utilities and industry incumbents
2. Make the competition irrelevant through cross-industry collaborations such as property and telecommunications
3. Create and capture new demand by creating a more inclusive energy value chain and breaking monopolistic structures
4. Break the value-cost trade off with large investment in product R&D for significant improvement in capacity and efficiency
5. Align the firm's activities in pursuit of differentiations and low cost by simultaneously reducing CapEx and OpEx

2 THE CHALLENGE OF VALIDATING BLUE OCEAN MARKETS AND THE TRAP OF INCREMENTAL IMPROVEMENTS



There is a distinction to be made between breakthrough innovations and innovations that enable incremental improvements by addressing pain points. The first is a top-down model that aims to be truly disruptive by focusing on blue ocean markets. The second is a ground-up approach that begins with a unique market pain point, typically drawing upon existing use cases in red ocean markets.

When energy innovation startups look to disrupt undefined market spaces, building the business case for its commercial viability requires a delicate balance between a directional sizing of the addressable opportunity and a blind stab in the dark for what the new paradigm could look like. The challenge that most founders face is establishing that baseline comparison.

“

There is a distinction to be made between breakthrough innovations and innovations that enable incremental improvements

Common traps that we have seen early-stage startups struggle with is when teams focus on niche pain points that lack scale across multiple use cases, or the solution is a standalone that requires additional integration efforts that is disproportionate to the incremental value brought to the user. This results in what is loosely coined as the 'pilot trap'.



KEY TAKEAWAYS

1. ENABLING COMMERCIAL SUCCESS REQUIRES A THREE-LEGGED STRATEGY

Commercials first, marketing second

Marketing priorities need to stem from business priorities. It is a common mistake to force-fit marketing know-how, terminology and classic engagement metrics without first addressing the elephant in the room. In an attempt to accelerate soft launch activities and aggressively build brand presence, many startups neglect to match marketing dollars to the commercial value that these initiatives bring to the core business.

Once the marketing dollars have been strategically allocated, it is critical that new-age marketing and energy industry know-how come hand-in-hand. Consumer technology and retail startups have been wildly successful in changing the game through innovative marketing tactics. However, renewable energy startups have traditionally put new-age marketing and branding on the back burner.

A strategic approach would be to put on a cross-domain hat, identify areas where other industries have succeeded in the innovation marketing agenda, and integrate these learning points into the commercial pipeline. From prototype to a marketable product, energy startups need to be able to articulate and communicate the core value proposition to the market.

“

How might startups overcome commercialization challenges in fragmented or complex markets? What are some of the strategic levers for scaling up renewable energy technology?

A well-defined distribution channel goes a long way

The energy industry is characterized by complex supply chain processes. Mapping the end-to-end stakeholders in the entire ecosystem helps B2B2C models target distribution channels for both direct and indirect sales.

Partnerships is more than a buzzword

Establishing strong ecosystem partnerships with both potential users and other third party stakeholders in the renewable energy industry drive inbound sales volume, establish brand credibility, and accelerate new market expansion in the medium run.

2. SCALE IS EVERYTHING, AND WITH IT COMES PRICING

Applying the 80/20 rule to the pilot and scale up stages

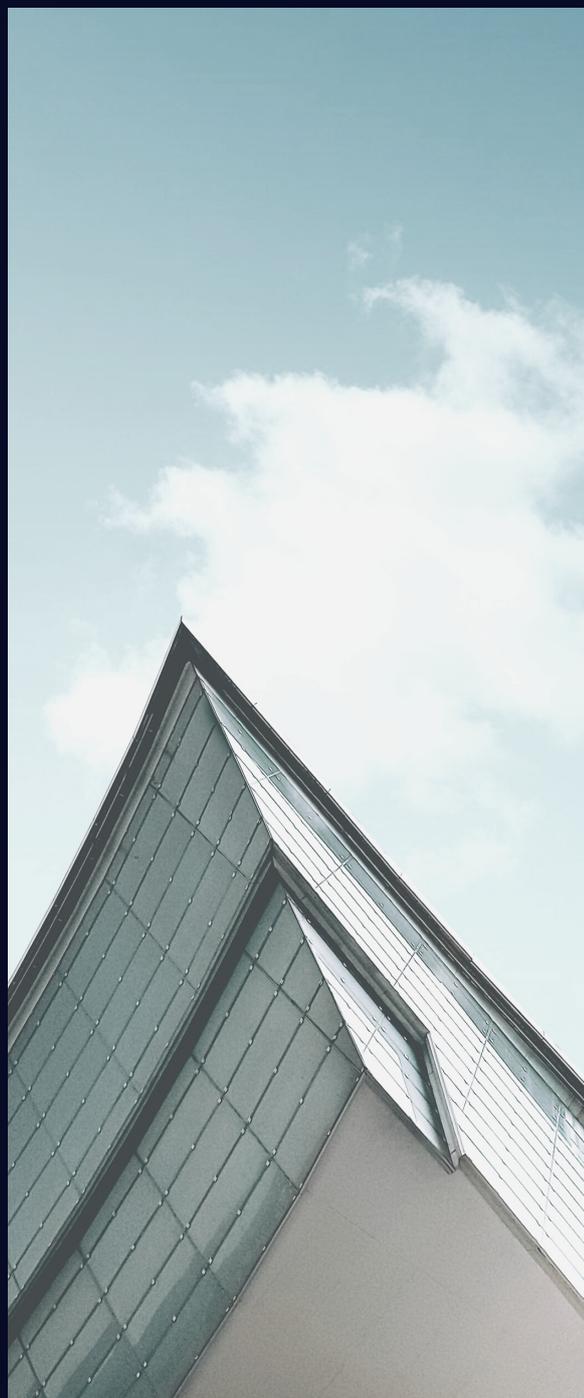
The 'pilot trap' occurs when startups channel a disproportionate amount of internal resources into exemplifying a successful pilot -- and stopping short beyond. It is key to acknowledge that whilst 80% of the resources channeled into the pilot will help bring early adopters onboard and validate the product-market fit, a critical 20% should focus on the longer term vision of how the users will be priced beyond the MVP.

Shifting gears from 80% to 20% requires deliberate planning beyond the initial sprint of the pilot use case.

Monetizing high volume markets through a tiered pricing strategy

Pricing is a key commercial enabler once the startup reaches the commercialization stage, however this is typically neglected by startups in the initial phases. Tiered pricing can be introduced in phases after a 6-month pricing break.

Based on price sensitivity in the market and projected volume, pricing at a per-use basis or for bundled value-added services should be at the forefront of startups' commercialization plan to ensure sustainable growth.



Shifting gears from 80% to 20% requires deliberate planning beyond the initial sprint of the pilot use case

- 1 Startup: Minimum viable product and sustainable business model
- 2 Scale-up: Rapid growth and long term vision
- 3 Increasing market presence and sustaining leadership



3. PRODUCT STICKINESS MATTERS IN THE RENEWABLE ENERGY INDUSTRY, TOO

Help early adopters move past the 'pilot trap'

Energy conglomerates are beginning to pilot decentralized energy technologies, from blockchain-based to Internet of Things solutions. However, very few have successfully implemented them at scale as they fall quickly into the 'pilot trap'. The business leaders that are first in advocating for innovative solutions typically struggle to establish executive buy-in at scale across the rest of the organization.

For instance, a blockchain-based solution that optimizes supply chain processes in a specific use case in the oil and gas subsidiary of a conglomerate could be similarly leveraged for a varied use case in the maritime subsidiary. The net loss is a limited use case for what could have been a game-changing technology for the larger organization.

Identify adjacent use cases to drive stickiness across the user's business

For B2B2C renewable energy startups that have gained pilot traction, what this means is that product stickiness needs to be an inherent component of their value proposition.

A solution that requires heavy integration and maintenance whilst solving for a standalone pain point is unlikely to get past the line in the commercialization journey.

Instead, startups should identify adjacencies in use cases that drive product stickiness across multiple business streams, with a case in point being the residential, commercial and industrial segments.

Renewable energy startups should identify adjacencies in use cases that drive product stickiness across multiple business streams



LOOKING AHEAD

A successful go-to market strategy begins with early pilot success, but its relevance in the marketplace will be determined by product stickiness and continued competitive pricing. The validation of these 3 moving parts requires a methodological approach to regularly stress-test its proposition with the target market segment.

For an early-stage B2B2C energy startup, the launch of a new-to-market technology should be driven by rigorous, iterative processes that sings to the tune of the disciplined traits that large conglomerates do so well in.

REFERENCES

1. World Economic Forum, in collaboration with KPMG. "Accelerating Sustainable Energy Innovation." January 2018.

<<https://assets.kpmg/content/dam/kpmg/xx/pdf/2018/05/wef-accelerating-sustainable-energy-innovation.pdf>>



VERTECH

CAPITAL

Vertech Capital partners with public and private sector stakeholders to drive the adoption of innovative technologies in infrastructure sectors. We curate and manage a global portfolio of cutting-edge technologies and investments, with traditional expertise in the energy sector.

Based in Singapore, our advisory arm focuses on the commercial translation of innovation, including disruptive technologies like blockchain and artificial intelligence. We are committed to building an open innovation ecosystem to accelerate access to the 4th Industrial Revolution.

 www.verttechcapital.com

 hello@verttechcapital.com

