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A new strategy model for the utilities sector

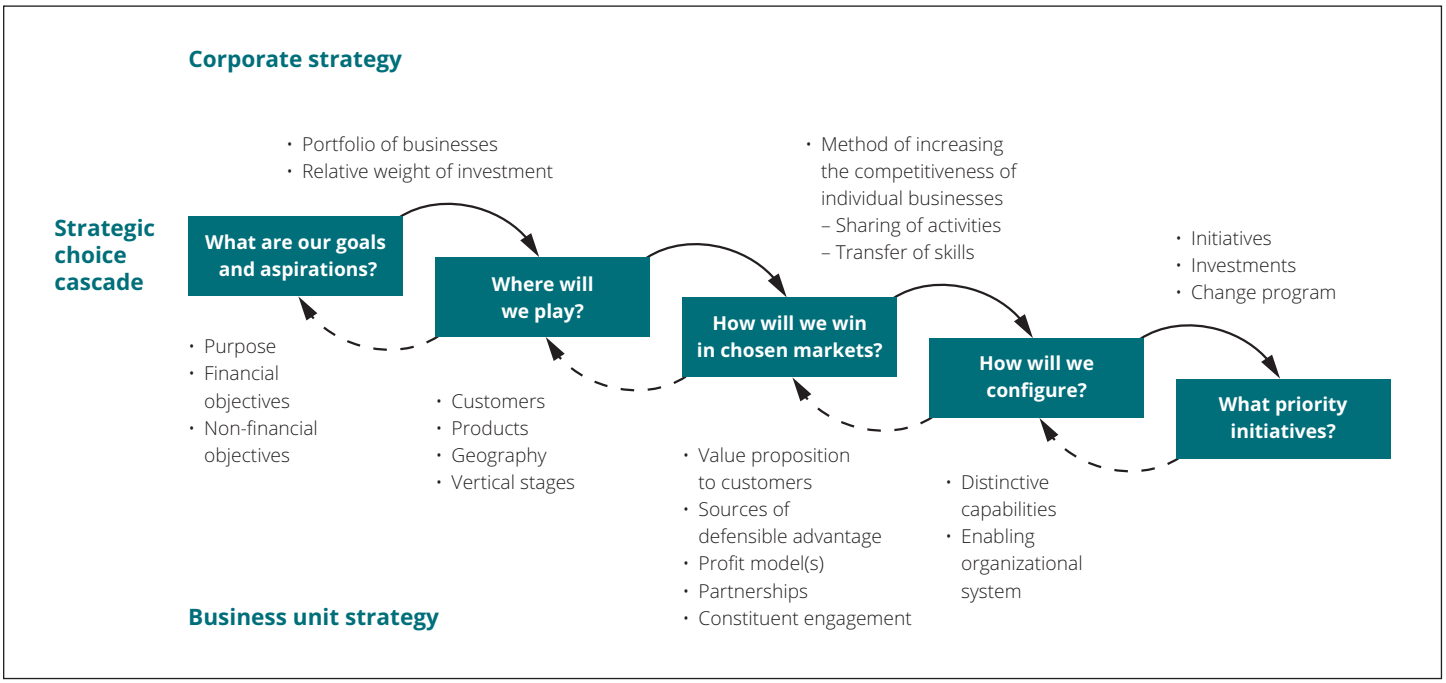
A bright ideas article

Strategy is about making choices, about where to play and not to play, about how to win where you choose to play, about the capabilities you'll need, and how you'll get those capabilities. Making these choices is tough at the best of times, but it's harder in this volatile environment. It's harder still when the choices being made are associated with exceptionally long time frames.

For decades, industries like big tech and telecom have followed a strategy choice cascade (*see figure below*) to stay agile and evolve with changing market circumstances. In contrast, the utility industry has been characterized by safe bets with long investment horizons as well as glacial shifts in operating technologies. Company leaders have faced relatively straightforward strategic choices:

- Operate efficiently and safely
- Earn at or above the company's regulated rate of return
- Consider buying peers in other franchise territories
- Transform into a multi-utility and diversify into other utility services
- Operate adjacent, unregulated service businesses such as energy trading or repairs

Strategy choice cascade[1]



Faced with these choices, the strategy for deploying capital has also been relatively straightforward for utility companies: use the maximum amount the regulator would authorize efficiently, and receive an almost-guaranteed return on that capital.

In recent years, threats to utilities franchise territory have loomed on the horizon due to the increasing economic viability of distributed energy resources. Strategic planning periods have shortened, but business executives, governments, and regulators in the sector have failed to change their processes in response. Shifts on both the supply and demand ends of the spectrum have forced the executive leadership of utility companies to adapt its growth strategy or risk falling behind. Government policymakers and regulators will need to help manage changes within the sector.

Key shifts in the supply and demand landscape

Canadian utilities should be aware of the following changes when creating strategies for the future.

Supply

Advances in distributed energy generation and storage have introduced competition to what had been a monopoly supply. Residential, commercial, and industrial energy consumers can now partially or entirely disconnect from the national energy grid. In many US states, doing this can already provide a positive economic payback. In Canada, the break-even point for people in most regions appears to be around five to seven years away. When a customer chooses to self-generate their energy or disconnect from the traditional grid, costs to run the grid either stay the same or increase. Revenues decrease—barring standby charges or other policy/regulatory interventions—, meaning prices rise for consumers remaining on the grid, who are less likely to have the means to follow others in disconnecting. Rising utility prices enhance the economic benefit of disconnecting from the grid, the issue accelerates in a feedback loop, sending the industry into a death spiral.

Companies in the power and utilities industry must also reconcile the issues that come with ownership. Taxpayers typically own Canada's utilities, so what happens when there are competing priorities? Let's say more solar energy generation is introduced into the market. At face value, this is great: electricity generated through solar panels is cleaner (depending on the regional energy mix). But there are also challenges—what happens to the legacy assets, whose value is now declining, that taxpayers and other ratepayers are still funding?

Take, for example, the now-cancelled Sidewalk Labs/Waterfront Toronto development. The intent was to build a self-sufficient smart community, one that could generate its own power and sell its surplus electricity to adjacent condominium buildings. But what could happen in a project like this when the hydro customers in these developments reduce their dependence on the publicly owned utility? The organization's infrastructure costs don't go down just because it's no longer serving these units. We must consider the long-term impacts of such projects, not only on the revenues of publicly owned local utilities, but also on the costs for residents in other areas of the city.

Demand

Demand has historically been predictable, often depending on factors like time of day, environment, and climate cycles. It can also be localized to specific grid end points, such as residential, commercial, and industrial addresses.

However, the demand profile is changing as electric transport becomes more common. Both British Columbia and Quebec have indicated plans to ban the sale of vehicles with an internal combustion engine[2] by the year 2035. All major automotive manufacturers have set out ambitious plans to grow their fleet of electric vehicles. According to Bloomberg New Energy Finance, more than half of all vehicles sold by 2040 will be electric because of these expansion plans.[3] This will cause the global electricity demand to rise by an estimated 5% within the same time frame,[4] equivalent to 13 million[5] barrels of oil a day. The Organization of the Petroleum Exporting Countries recently predicted[6] that oil demand would plateau by the late 2030s due to the increased adoption of electric vehicles and permanent shifts in consumer behaviour due to the COVID-19 pandemic, such as the transition to remote work. Coupled with the potential for a hydrogen economy in North America, this could lead to a new, unpredictable, and very nomadic supply and demand backdrop. These changes would be difficult and costly for grids to manage and for local distribution grids to support.

Essential questions

As the power and utilities environment changes, executive leaders, government policymakers, and regulators face difficult strategic choices. These are hard decisions to make, but hesitancy could risk destroying value, stranding assets, slowing economic growth, and frustrating or depriving citizens.

The following are some essential questions to consider.

For businesses

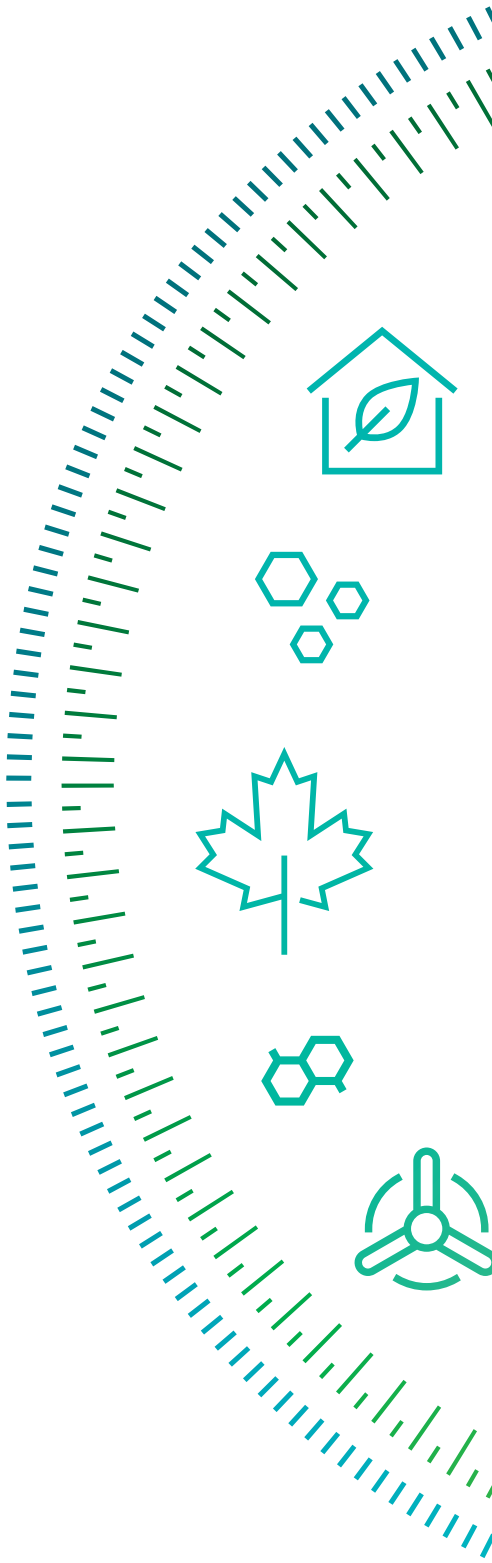
- How much risk does disruption to supply and demand pose to our core business?
- Should we remain focused on investing in our core regulated utility, or should we diversify and divert capital into higher-growth sectors that have less certain and more volatile returns?
- How will we optimize our growth strategy to ensure the grid can support new intermittent, nomadic supply, as well as the strains on demand caused by distributed generation and electrified transportation?
- How will we convince the regulator these are necessary investments?

For governments

- Who will pay for upgrades as electricity systems expand to serve new demand?
- What is the larger impact of policy choices regarding electricity systems?
- Do the traditional jurisdictions of energy continue to hold up? Will they continue to exist within the provincial domain, or will the federal government need to play an expanded role to maximize the benefits for all citizens?

For regulators

- How will the stewardship of grid infrastructure be balanced with potential value innovation for customers?
- Is the region prepared for the potential scenarios concerning the future of energy, and what are the contingency plans?



Strategic responses

The new strategy model for utility organizations will require innovative approaches. Here are some to consider:

Strategy frequency
With the environment changing too quickly for a five-year plan to stay relevant, strategies must now be assessed annually or even more frequently.[7]

Team-based
Many parts of the business are being affected by the changing dynamics of the industry. This means there's a growing need for internal cohesion, understanding, and alignment. A strategy must be formed collaboratively by the entire executive suite, along with their teams, and all parties must be engaged and involved to generate the organizational buy-in required for transformation.

Ecosystem-based
It will be increasingly difficult for companies to form viable winning strategies without considering the ecosystem around them. Distributed-generation players, charging-infrastructure players, transportation providers, regulators, and governments must work collaboratively, all in service of meeting consumer demand.

Regionally focused
While it may seem obvious, leaders need to be hyper-focused. They must separate what is happening nationally from what is happening in their own jurisdictions. Utilities operating in adjacent provinces will face vastly different energy choices and realities. All industry trends must be contextualized, with careful consideration for the changing dynamics of politics, weather patterns, and everything in between.

Horizon duality
With a less static future on the horizon, utility providers must consider both short- and long-term strategies. They must simultaneously think through infrastructure lifetime spans (20-plus years) in conjunction with short-term changes.

A zoom out/zoom in[8] approach—a concept developed to help industries facing ambiguity in the future—can be used to look beyond the short term. For example, if the levelized cost curves for solar technology and energy are well-established in your region, the timeline to cost parity with grid-supplied electricity may look uncertain in the short term but more promising over the long term. What would this mean for your business?

Scenario-based thinking
Utility providers must embrace uncertainty and acknowledge they don't know where the future is going. But they can know what the key uncertainties are. These scenario-thinking and sensing capabilities can strengthen the courage and conviction of executives, helping them lead through these unique times.[9] Going further, utilities must create advantaged portfolios of choices based on the decisions that work in any future scenario. Or at the very least, a playbook of difficult choices that they'll be able to survive.

No half-baked strategy
The strategy choice cascade does not end with aspirations, where to play, and how to win. Choices that will dictate the organizational and operational future of a company must align with its priority initiatives. Without a strong connection across the choice cascade, forming strategies will either become a paper exercise or get lost in poor execution.

Charting the future for utilities

Canada's utilities sector is faced with a challenging future, but not an impossible one. For many regions, changes in the external environment are no longer decades in the future. They are imminent. With governments and regulators focused on affordability, climate change, consumer choice, and innovation, there is the opportunity for growth, albeit complex, in the power and utilities market. Meeting these challenges will require strong leadership and a robust decision-making process.

The path toward a connected series

This article is part of a series that explores the issues facing stakeholders in the energy ecosystem, the options available to them, and case examples of what others both in and out of the sector are doing. Topics for ***Bright ideas: New perspectives on the future of Canada's power sector*** include: assessing strategic risk and making smart choices; energy transition through innovation and digital transformation; the impact of the evolving customer lens; energy transition and operational implications; and the cyber risk implications of energy transition.

We hope that you will join us in the conversation.

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Acknowledgement

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Bright ideas: New perspectives on the future of Canada's power sector

Explore the series

Illuminating the energy transitions discourse for Canada

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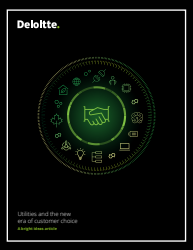

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