

Workforce Development: What's Culture Change Got to Do with It?

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ABSTRACT

The oil and gas sector's operations account for 9% of total GHG emissions and 40% of total industrial sector emissions. The energy transition is underway, and it has the potential to erode or eliminate much of the oil and gas (O&G) industry's legacy revenue sources. O&G companies are starting to recognize that their social license to operate is under threat. While the energy transition presents an opportunity for the O&G industry to pivot, employees of O&G companies feel uncertain about the future of their industry and their jobs, which is exacerbated by a lack of clear communication from leaders. O&G companies need fast, deep, and broad change to navigate the energy transition effectively.

The culture shift demands new thinking, attitudes, systems, and behaviors. While the desire to evolve is burgeoning among some organizations, the required level of change requires mass mobilization from both leadership and employees. The paper will present the principles required for culture change to prepare the workforce for the energy transition. These principles have been distilled by studying an industry with a similarly conservative and long-standing culture that is farther along the energy transition: North American electric and gas utilities. This paper is based on primary research within two groups: utilities that have made a proven transformation to a culture of decarbonization and employees from the O&G sector who have transitioned to new roles focused on decarbonization. Secondary research provides supplementary perspectives that underscore findings from the primary research.

By applying these principles, O&G leaders will be able to effect a change of the necessary depth and breadth needed to create a sustainable, innovative, and resilient workforce within their organizations and beyond.

Introduction

Decarbonization is widely viewed as vital in all industries, driven by corporate responsibility goals, consumer desire for sustainable products, and pressure from investor interest in sustainable and resilient assets. O&G industry majors are responding to the energy transition by pledging to reduce greenhouse gas emissions, adopting technologies such as carbon capture and storage, purchasing carbon offsets, and evolving their energy portfolio mix through investments and acquisitions in renewables. However, real progress has been slow. As of 2021, oil-related emissions are below 2019 emissions levels only because of lower levels of transport activity (IEA 2021). Natural gas combustion-related emissions increased from 2019, and coal emissions were at an all-time high (IEA 2021).

The energy transition is underway and accelerating, and it has the potential to erode or eliminate much of the O&G industry's traditional revenue sources. To successfully navigate the energy transition, the O&G industry must be open to unprecedented cultural changes within their organizations.

“In the boardroom there is always talk about reducing the carbon footprint. The fact that it is happening at the boardroom level and at the investor level means there is a cognizance that there will be real world consequences if they don't curb their emissions. And as an industry, they recognize that their social license to operate is under threat.”

Figure 1. Quote from Emmanuel Amadasun, Commercial Associate, bp pulse.

Such wholesale change management requires movement and mass mobilization from both leadership and employees. The culture shift demands new thinking, attitudes, systems, and behaviors. Innovation is required, and new and existing talent must be directed to areas new to the organization.

Some industry majors, like Shell, TotalEnergies, and BP, have started rebranding themselves as energy companies, focusing on new areas like transportation electrification, hydrogen, and offshore wind. These organizations have allowed those in more traditional O&G functions to transfer their skills to new areas, giving employees new career pathways in the energy transition, though the vast majority of business operations and the industry at large remains focused on hydrocarbons.

North American electric and gas utilities are an example of an industry that's made a similar transition. Many utilities have long been required to promote energy efficiency programs that push them to sell less of their product. These programs provide societal benefits by offsetting new infrastructure requirements and delivering less pollution, lower energy bills, and improved safety and comfort, yet their implementation is directly at odds with any logical business model. While policies such as revenue incentives have mitigated the negative business effects, scaling the programs required a culture shift among utility leaders and employees. Utility scale and customer-sited renewables and other distributed energy resources also represent a threat to the traditional utility business and require adaptation to an evolving energy market.

“Management deals mostly with the status quo and leadership deals mostly with change; in the next century we are going to have to try to become more skilled at creating leaders.”

Figure 2. Quote from John Kotter, Konosuke Matsushita Professor of Leadership, Emeritus, Harvard Business School.

Approach

The findings in this paper are based on primary research within two groups: utilities that have made a proven transformation to a culture of decarbonization and employees from the O&G sector who have transitioned to new roles focused on decarbonization. Table 1, below, lists the names, titles, and affiliated organizations represented by interviewees of this primary research effort. Interviews were recorded, transcribed, and analyzed to determine key findings and themes from the primary research. We also draw on our experience implementing and evaluating utility

energy efficiency programs in North America over the last 40 years. Secondary research provides supplementary perspectives that underscore findings from the primary research. By applying the lessons taken from our findings, O&G industry leaders can affect necessary change within their organizations and beyond.

Table 1. Primary Research Interviewees

Name	Title	Organization
Carol Liffman	Director – Climate Risk and Resilience	DNV (former oil and gas company employee)
Emmanuel Amadasun	Commercial Associate	bp pulse (formerly focused exclusively on O&G)
Hari Vamadevan	Regional Director – Energy Systems	DNV (formerly focused on O&G)
Huck Montgomery	Director – Government Affairs	Liberty Utilities
Kathryn Valdez	Director – Carbon Free Technology Policy	Xcel Energy
Michael Ashby	Technical Recruiter	DNV (former Shell employee)
Mohsen Shavandi	Director – Energy Systems	DNV (formerly focused on O&G)
Rob Furino	Director – Energy Contracts	Unitil
Teri Van Sumeren	Executive Director – Energy Efficiency and Renewables	Consumers Energy
Confidential	Director of Sustainability	North American Utility

The study authors would like to thank the interviewees for their time and insights.

Guiding Principles

While the principles of change management are well established, applying these to the O&G industry to achieve decarbonization goals is a newer challenge. Such a major cultural shift requires universal buy-in to achieve success. “Buy-in is critical to making any large organizational change happen. Unless you win support for your ideas, from people at all levels of your organization, big ideas never seem to take hold or have the impact you want” (Kotter 2010). Many change management processes stall or fail before they are fully implemented; as a result, many employees adopt a “wait-and-see” approach to new management initiatives. Such attitudes will undermine major cultural change and impede success. Achieving decarbonization will also require innovation, including new products and services. Employees will be pushed outside their comfort zone and required to learn new skills or apply existing skills to new problems with new tools.

From our research, we distilled the following guiding principles to effect this culture change.

- Collaborate and communicate
- Build accountability in leadership and reward results
- Lean into decarbonization discomfort

- Adopt a systems thinking approach

We elaborate on the following four principles for implementing major change in the sections below:

1. Collaborate and Communicate

Successful change management starts with a clear vision. Defining an organization’s vision and goals should be a thoughtful and transparent process that inspires key stakeholders and bolsters an organization-wide culture shift. Inclusivity and appreciation should be part of the vision- and goal-setting processes to build employee support and willingness to collaborate. Additionally, promoting this vision externally can help attract potential new team members who agree with the organization’s new vision.

1.1 Collaborative development of vision and goals

Leaders should work collaboratively with employees to develop the new vision and associated goals. When allowed to provide input, employees are more likely to be invested and committed to realizing the desired outcomes. In addition, deep change like the energy transition requires innovation, pushing employees far beyond their comfort zone. They must apply their existing skills to new problems with new tools and teams. Collaboration and openness to learning are key characteristics of leaders who successfully foster innovation. Collaboration broadens both an individual’s experience and the collective knowledge of the organization.

A recent study with 1,500 change practitioners found that transformation success hinges primarily on people rather than technology (Bivins 2014). In the early 1990s, IBM successfully transitioned from a company selling office equipment and computer hardware to one providing knowledge services. They did so by encouraging the employee-led development of a vision and implementation framework. IBM assembled a task force comprising 100 senior but non-managerial employees who were high performers in their current roles. In just over a year, IBM successfully transitioned the group into new roles and processes. Employees who co-developed the vision moved from “I hear, to I understand, I accept, and finally to I am part of this — I become.”

DNV’s primary research shows that organizations that have successfully established a new vision and goals have done so by actively encouraging employee input and promoting inclusiveness and transparency with 7 out of 10 interviewees underscoring its importance.

“What I have learned over time is to be more inclusive. Be inclusive. If you only involve the “normal” people, they may not know what else is going on. By inviting everyone to the table, all become more aware and more involved. You begin to see them talking about projects and taking ownership because they know what we are trying to accomplish.”

Figure 3. Quote from Rob Furino, Director – Energy Contracts, Unutil.

1.2 Communication for effective collaboration

Successful collaboration cannot occur without effective communication. In a major culture shift, effective communication must be repeated and ongoing to show the organization's commitment. As reported by a former O&G employee, one-time communications were perceived as “greenwashing” and messaging aimed at the investor class, resulting in no real change to daily operations. Several interviewees noted that engaging the team early and often is best practice for identifying and addressing problems and securing buy-in on plans and actions.

Using forums such as internal town halls with spotlights on the topic of decarbonization to discuss, take questions, and facilitate dialogue was mentioned as a tactic to create fertile ground for ideas. Other successful tactics include the use of internal communication tools that enable all employees to generate and contribute to the conversation. This includes providing both formal and informal communication channels that employees can tap into. Though it takes effort, ongoing communication will trigger and sustain employee motivation which leads to innovative new ideas.

“We can’t communicate enough about why we are doing this, who it is responding to. It is not just one set of stakeholders. It is what we are seeing customers, regulators, and policy makers want us to do. We need to communicate this a lot. Communicate that it is a process and it is not launched and firm. These are visionary plans. Exactly how we do it is going to change and evolve. We want to be nimble and have people bring ideas forward, which is a big part of it.”

Figure 4. Quote from Kathryn Valdez, Director – Carbon Free Technology Policy, Xcel Energy.

1.3 Promote your vision externally

An organization's vision should be clearly articulated in external communications, especially in job ads, to attract employees who appreciate and embody it. Some employees may be motivated to work at an organization because of the company purpose. Organizations can be purposeful with their commitments to decarbonization, engaging in campaigns to increase sustainability etc. to create a culture that enables a collective path towards working to meet goals. This in turn creates a virtuous feedback loop and helps to add new employees aligned with the vision who will consequently continue to shift the attitude of the employee collective.

“Employees are attracted to vision. New people bring fresh ideas and perspectives that are aligned to our vision and technology optimism. We want to hire in expertise and are trying to find people who have experience in advanced technologies. We want to own and operate the digital, decarbonized, advanced technology while focusing on serving our customers.”

Figure 5. Quote from Kathryn Valdez, Director – Carbon Free Technology Policy, Xcel Energy.

The onboarding process provides additional opportunity to outline the steps for achieving the vision and provide examples of the desired behaviors. New hires will not only bring their own (aligned) values, but they will also influence existing employees and normalize the desired behavior within the organization. During a major culture shift, turnover isn't always negative — it can provide unique opportunities for accelerating the transition.

As organizations navigate the energy transition and shift long-term hiring priorities into the renewables and digitalization space, job descriptions are starting to evolve accordingly and also consider motivators such as innovation, adaptability, and sustainability to attract candidates with the desired profile. Both utility and ex-O&G interviewees pointed to the especially crucial role human resources (HR) can play in helping organizations navigate the energy transition.

“Turnover is a great opportunity – in addition to growing our skill sets over time, as we experience turnover, we adjust and update our job descriptions to try and bring in skills and interests in more renewable and sustainable fields.”

Figure 6. Quote from Rob Furino, Director – Energy Contracts, Unitol.

“Some oil and gas companies saw a huge shift in who they were attracting. In terms of innovation and people who we consider future leaders, they saw a big intake in that as well. There are a lot more people who are climate aware and environmentally open as they start getting more diverse.”

Figure 7. Quote from Michael Ashby, Technical Recruiter, DNV (former Shell employee).

This finding is echoed in an article from the Society of Human Resource Management (Bates 2011). It states that HR is well-positioned to support the effective execution of sustainability initiatives, which require strong connections within the organization and the ability to move the right levers. As the interface between the organization and potential new employees, HR can be a key ally in promoting the organization’s vision externally and in building the team needed to achieve its goals.

2. Build Accountability in Leadership and Reward Results

Leadership accountability substantiates the organization’s commitment, especially in the face of major change, and is necessary before employees will trust the transition. The magnitude of change required in the O&G industry for the energy transition demands employee buy-in. DNV’s research found that organizations must have systems in place to implement accountability. Rewarding results will further signify commitment and incentivize behavior change.

2.1 Accountability in leadership

Leaders play an important role in the change process by defining the vision of the energy transition for their organization. Accountable leaders will also model the vision’s implementation, showing that they are open and able to make the change happen. Accountability from leadership will encourage individual action. Individual action will lead to collective action that can be optimized by the organization.

An article from the Stanford Social Innovation Review notes the importance of leading by example, especially when employees are skeptical about the organization’s motives or perceive that the desired change may not be beneficial to them (Polman and Bhattacharya 2016). Leaders’ actions back up their words, demonstrate follow-through, and signal company values to

employees, effectively persuading them to support and collaborate to achieve the vision. This emerged as a theme in our interviews with utility and O&G professionals as well.

“You don’t know what people are thinking, but what you can do is change the way people behave. You can change that by your own actions and by creating a standard for behavior. You need to model the behaviors that you are promoting at senior levels of leadership. A lot of people will follow that.”

Figure 8. Quote from Carol Liffman, Director – Climate Risk and Resilience, DNV (former oil and gas company employee).

2.2 Reward results

Effective organizational design sets up systems that reward results by compensating leaders and employees for good work. Reward systems can also be applied to broader organizational goals and performance processes. Our interviews indicated that some utilities have begun to base executive compensation on energy transition progress.

“The company has several compensation strategies. One such strategy is the ability to reward restricted stock as compensation for consistently exceeding or meeting significant targets and objectives. This has been used to help compensate some of the employees that go above and beyond in energy and waste reduction. Have a “one team” perspective because of the interesting compensation mechanism in Michigan – which encourages optimization of segments as opposed to one segment being successful.”

Figure 9. Quote from Teri Van Sumeren, Executive Director – Energy Efficiency and Renewables, Consumers Energy.

In addition to leaders talking about the importance of their sustainability and decarbonization goals, they have embedded performance on ESG initiatives in leaders’ payment scorecards. This is an impactful approach to generate support and similar reward structures can be extended beyond management to the broader employee base for successful outcomes.

“I could imagine that ESG scoring could become a performance metric tied to compensation. But we are more traditionally focused on safety and reliability standards.”

Figure 10. Quote from Rob Furino, Director – Energy Contracts, Unifil.

Parallels can be found in the automotive industry as it navigates the transition to transportation electrification. Companies like GM are tying executive compensation to achieving performance targets, such as the rollout schedule and volume of electric vehicles sold in North America (Doll 2022). Through this system, GM signals its commitment and passion for its mission to its leadership and employees. Similarly, a recent *Washington Post* article stated that Proctor & Gamble (P&G) has developed an ESG “scorecard” that it uses to determine executive bonuses (Mufson 2022). Underperformance on ESG goals can result in a 20% cut in annual bonus amount and achieving ESG goals could add 20% to the annual bonus amount for P&G executives (Mufson 2022).

Our research with utility company employees indicated that sustainability performance could be tied to compensation as a way to generate support, but current policy and culture present some barriers. Barriers indicate a lack of commitment to ESG goals in favor of other priorities as well as certain compensation tactics being restricted to high levels of leadership.

3. Lean into Decarbonization Discomfort

The energy transition demands that O&G companies innovate and explore new business areas which will require new expertise and applying existing skills to new problems. New means unfamiliar, and unfamiliar leads to discomfort. New business areas and expertise will be seen as a threat to career stability in the O&G industry.

Interviewees noted that decarbonization strategies can only be successful if feelings of mistrust and uncertainty are acknowledged and validated before attempting to change the culture. Organizations must develop a plan to operationalize the transition, which must include retraining (and retaining) existing employees. Transparently communicating the plan will alleviate discomfort and build trust between employees and the organization.

3.1 Listen to and support employees

Leaders should listen to and support employees as they adapt to change. The energy transition represents a disruption to career continuity and stability and is viewed as a threat by many employees in O&G. Uncertainty around job security may lead to mistrust between employees and the organizations employing them. Several interviewees previously focused on O&G exclusively (4 out of 5) noted the fear and uncertainty that comes with inadequate information during times of change. Providing a clear transition path for each person may help alleviate this mistrust and subsequent frustration. Career transition paths can be designed with employees, as they have unique insight into their field and will provide valuable strategy direction. Notably, collaboration and communication can assuage feelings of uncertainty and mistrust.

“Ideally, these O&G leaders need to say what they plan to do and what will happen with the existing workforce. They need to lay out a strategy and let employees know what it is. If folks don’t know what the plan is, then they do not trust the senior leadership. As employees see assets being sold off, there is an attitude of ‘Am I next?’”

Figure 11. Quote from Michael Ashby, Technical Recruiter, DNV (Engineer and former Shell employee).

Interviewees noted that there is mistrust among O&G employees because, while they are open to change, the lack of communication from leadership leads to uncertainty surrounding their future. The absence of communication creates a vacuum and employees assume the worst. As employees see other oil companies divest major operations or sell assets to other smaller oil

companies, they are left with a feeling that this could be their future, and they remain in the dark about this outcome.

“Every change comes with challenges and fears for some people and uncertainty for some and opportunities for some depending on how they see those. There was a lot of uncertainty before, but now people are finding their niches and realizing there are certain things they can focus on. It just takes communication and awareness of what is happening in the industry. Competencies in O&G are critical and needed, we just need to determine their fit.”

Figure 12. Quote from Mohsen Shavandi, Director - Energy Systems, DNV (formerly focused exclusively on O&G).

3.2 Plan for the transition

Several interviewees previously focused on O&G exclusively (4 out of 5) noted that there will likely be a segment of the workforce to whom the energy transition does not promise opportunity or hold appeal. This segment is likely to have a higher proportion of those who are closer to the end rather than the beginning of their careers, with decades of experience with hydrocarbons. These employees can remain in their current roles or, if necessary, transition to other hydrocarbon roles. Not all fossil fuel-based jobs will disappear immediately. This was echoed by a utility interviewee when making the point about the current and near-term criticality of gas to the safety and economies of their service territory.

“We are not changing everyone’s job. Current jobs are ongoing and critical.”

Figure 13. Quote from Kathryn Valdez, Director, Carbon Free Technology Policy, Xcel Energy.

Implementing a culture shift should include planning the operational transition, retraining, and intentional job posting and hiring. The transition plan must indicate where, when, and how many jobs will be needed for the new vision and how many will be lost from the old. Retraining efforts should focus on areas with the potential for the highest impact; for example, those that are most crucial to the company’s initial transition or those with the greatest influence within the organization. Before the transition, it is critical to identify those employees who are willing and able to make a career shift, and retraining opportunities should be limited to them.

Decisions related to retraining and a career transition “...depends on what stage you are in your career to buy in. There are some who have been in O&G for a long time and their outlook is very different from a 20-year-old’s. There is an element of wanting to work in tomorrow’s sector not yesterday’s sector among the latter.”

Figure 14. Quote from Hari Vamadevan, Regional Director - Energy Systems, DNV (formerly focused on O&G).

The energy transition is likely to accelerate employee turnover in the near term. Even without such an extreme culture shift, the U.S. Department of Labor predicts that up to half of the workers in the energy industry will retire within a handful of years, painting a stark picture of the turnover companies will face (Clarion Energy Content Directors 2014). This surge in retirements will require not only retraining the existing workforce but also recruiting new workers to fill the gaps. The gap between the transitioning employees and required labor must be filled with new employees, providing an opportunity to inject the organization with new staff that bring transition-aligned ideas and expectations.

3.3 Invest in retraining opportunities

The retraining process should address uncertainty and mistrust, provide opportunities to invest in employees' transferable skills and build confidence and community. Sharing success stories and celebrating collaborative efforts makes potential career shifts more tangible and exciting, which in turn can support a culture shift towards decarbonization. Stories from peers can be impactful and allow employees to rely on one another's experiences and expertise.

“There is not a lot of communication in terms of direction and where the majors can go. Are they going to help employees reskill? Not seeing a lot of that happening. If employees are dedicated to their current roles and there is no reskilling and training, then what will happen? Employee perception is that there are no plans for reskilling. They see that the companies are just buying other assets and working with outside third parties versus reskilling and growing innovation from within.”

Figure 15. Quote from Michael Ashby, Technical Recruiter, DNV (Engineer and former Shell employee).

A publication from the International Energy Agency discusses how skills from the fossil industries transfer to clean energy sectors (IEA 2022). For example, O&G workers' skills are transferable to offshore wind, carbon capture utilization and storage (CCUS), and low-carbon gas production and transport. Similarly, coal miners' skills are transferable to the critical minerals industry, which is projected to grow seven-fold by 2050. Minerals like lithium, copper, and cobalt are essential for clean energy technologies such as renewables and battery storage. As mines and O&G wells are closed, employees with expertise in these sectors will be needed for environmental restoration.

Similarly, a recent issue of *PowerMag* notes the vast experience with offshore oil rigs, fixed platforms, and floating systems that O&G companies have, the risks they have taken historically in developing the deep-water field, and the learning that has come from that related to complex geologies, geographies, technologies and more (Larson 2021). There is opportunity for these legacy O&G companies to translate that experience into expediting the development renewables such as offshore wind and floating solar. Within the O&G industry, there is growing recognition of the traditional skills that are transferable to the clean energy transition. Retraining allows organizations to invest in their current employees, avoiding the cost of recruiting and onboarding and retaining employees with known capabilities. Capitalizing on transferable skills can optimize the retraining process from both the employees' and the organization's perspective. It can also

improve employee-employer relations as mutual respect is established as a result of the investment.

DNV's research with all 5 interviewees previously focused exclusively on O&G reflects both the uncertainty perceived by current O&G sector employees and a recognition of the potential for transferring technical skills to the clean energy economy.

“These are high-risk initiatives for the companies. If you do not have the technology or experience, there is an even greater risk. From the employee side: usually when there is a big change, you get mixed feelings. Some see it as an opportunity, some view it as a trap. There are more opportunities than traps. On the renewables side: wind is a mature technology, but offshore wind is new. O&G engineers have experience with offshore structures. Turbine folks have experience with turbines. To be able to deliver offshore wind projects you need both of those competencies. Some people are working on offshore structures (e.g., floater, platform, how it's connected to the seabed, etc.). To them, they are agnostic to what sits on top of the platform. Similarly, for storage: if we are going to store CO₂, that is new to some operators, but CO₂ is used for recovery by others. That is experience that we already have in offshore. You need to combine capture and storage to deliver the project. That awareness is being created in the industry. I don't see that resistance in the industry now that I used to see a few years ago. The mindset is changing that this needs to be how we do it.”

Figure 16. Quote from Mohsen Shavandi, Director - Energy Systems, DNV (formerly focused exclusively on O&G).

4. Adopt a Systems Thinking Approach

Cultural change cannot be achieved in silos. It is a top-down, bottom-up, all-around effort. If employees are mistrustful, then they may become territorial and defensive which could lead to individual and team withdrawal, restricted access to clients, and blocked knowledge pathways. Common themes that emerged from our interviews were to look outside the organization and beyond a single sector for opportunities and adopt a holistic systems-thinking approach to achieve decarbonization goals.

4.1 Engage the entire business ecosystem

Innovation is imperative to help organizations move into new markets and services and hasten decarbonization. Business ecosystems enable organizations to accelerate innovation and co-create value with a network of entities with shared or complementary interests or goals. Ecosystems can be developed by building beneficial networks with partners, customers, suppliers, and even competitors. A successful ecosystem will lower risks, share costs and information, improve access to resources, and expand the reach of all its members.

Amazon is a business ecosystem leader that has reaped these benefits. From its origins in 1994 as “the world's largest online bookstore,” Amazon successfully cultivated third party sellers and developed a platform that expanded the market for their goods. In turn, this increased revenues for Amazon and enabled diversification beyond books. Over the next decades, Amazon expanded to include Prime subscriptions, video, music, cloud computing, groceries and more.

Amazon developed product innovations such as the Kindle e-reader and Fire for streaming entertainment. Amazon also made complementary acquisitions such as GoodReads, a book review and recommendations site. It allows authors to directly publish e-books free of charge via Kindle Direct Publishing, engaging authors and bringing original and new content to the market. In effect, Amazon has a symbiotic, not parasitic, relationship with other entities in its ecosystem, helping it thrive versus stagnating in a challenging and ever dynamic market.

Business ecosystems are also being developed in the energy industry. In 2022, Sony and Honda entered into a joint venture to pursue innovation in electric mobility (Sugiyama and Shiraki 2022). They will leverage the intelligence of each organization to create cutting edge technology and new electric mobility and services. Pacific Gas & Electric (PG&E) has teamed with Tesla to access an aggregate network of residential Powerwalls as a “virtual power plant” to increase power supplies when renewable energy drops (McCarthy 2022). They have also teamed with Google Nest, Ecobee, Honeywell, and Emerson to reduce grid needs from cooling and heating by providing incentives for smart thermostats (PG&E 2023) and with BMW to distribute EV charging loads to match grid supply (BMW Group 2021). These partnerships contribute to decarbonization by reducing demand for electricity during peak periods when electricity supply has a higher carbon footprint due to low renewable output. This approach to engage the ecosystem to spur innovation and guide strategic decision making was reflected in our primary research as well. Consumers Energy interviewee, Teri Van Sumeren, noted that their leadership continued to have discussions to build relationships and partnerships with GM, Pfizer, and Dow among others, when talking about leveraging complementary thinking and identifying possible future opportunities to work together.

“Our stakeholders have great ideas. Being open to their perspectives and ideas has been invaluable in terms of establishing relationships and feeling comfortable to lean in and have tough conversations. Being open to other perspectives applies both within the organization and with our external stakeholders. It is not just having a meeting and saying we heard them - but having a real conversation about pros and cons of the various approaches is valuable.”

Figure 17. Quote from Teri Van Sumeren, Executive Director – Energy Efficiency and Renewables, Consumers Energy.

4.2 Expand and evolve organizational identity

As noted in a 2021 World Bank publication, the international community has recognized the need for an intersectional approach to sustainable development (Suit et al. 2021). Stakeholders must work together to minimize trade-offs and increase synergies between different, and sometimes competing, sector-focused goals. All 5 out of 5 interviewees previously exclusively focused on O&G noted that some companies in the O&G sector have begun the process of expanding and evolving their organizational identity.

An example of this organizational evolution is Shell, an oil major that now bills itself as an energy company. In 2019, Shell acquired Greenlots, a company that provides EV charging solutions. In 2022, Shell unified Greenlots and its European counterpart NewMotion under its Shell New Energies subsidiary and rebranded them as Shell Recharge solutions. This shows that

Shell is moving away from an extractive business centered around fossil fuels to electric vehicle charging solutions. Shell has also recently entered the Texas market as a renewable energy supplier.

An interviewee, formerly focused on O&G who now works on fleet electrification solutions at an oil major, noted that despite these signs of their transition, it is not assured that the innovation and employee culture from these new units will permeate the rest of the legacy organization. Innovating from within and integrating with newer acquisitions can enable organizations to evolve and accelerate the energy transition.

5. Conclusion

The world's energy portfolio is evolving in response to climate change, with "new energy" such as renewables and electric vehicles on the rise while traditional fossil fuels are in decline. O&G companies need fast, deep, and broad change to navigate the energy transition effectively.

The process of intentionally shifting an organization's culture will induce discomfort. The discomfort will be mitigated when employees fully support and trust the new vision. This support can be generated through collaboration, communication, accountability, rewards, and transparency. The support will result in growth, innovation, partnerships, new systems thinking, and organizational success.

The O&G industry has made public commitments to decarbonization, but without concrete action internally and externally these pledges will go unfulfilled. Organizations have the talent and capital to power and scale the energy transition in traditional and new markets. A well-thought-out, deliberate program of change management will help companies shift to a sustainability-focused business model that ensures they remain the primary source of the energy that fuels global progress.

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