

Workforce Renewal: A CEO's Strategic Imperative

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Valuation of human capital as an asset, not a cost, gives executives a tool for both addressing aging workforce issues and improving shareholder value.

The production of electricity and gas, the primary sources of revenue for most utilities, requires a wide variety of assets. Most of these assets are mechanical or electrical equipment – pumps, generators, transformers, regulator valves, etc. – that have an expected service time before degraded function or failure occurs. The potential financial losses due to a generator or transformer failure (on the electric side) or a regulator failure or transmission line breach (on the gas side) are obvious. Equipment at risk is identified, and sophisticated techniques are used to monitor their condition. Companies develop programs to determine when “end of service” is likely to occur, and budgeting and planning activities are initiated well in advance of potential failures.

However, one critical and very near-term end-of-service issue is not receiving the same level of scrutiny. The utility workforce retains a vast array of experience-based knowledge that is specific to critical assets of the utility's operations. But this army of highly skilled, well-trained and hard-working men and women is coming perilously close to its end-of-service date over the next five to seven years (see sidebar). The aging workforce is as critical a part of utilities' asset profile as an aging piece of equipment, and the current scarcity of replacement talent makes it arguably the asset in most dire need of immediate attention.

Cost cutting over the past decade left a substantial gap in the pool of experienced internal talent to replace retiring workers. Layoffs and buyout programs were used to cut workforces, vacated positions went unfilled and new hiring slowed to a crawl. The willingness of younger, more mobile employees to move on in the face of instability worsened this imbalance.

Unlike a transmission line or a cooling water pump, off-the-shelf replacements for people cannot simply be procured. These new workforce assets must be recruited and trained on the key operational and safety functions of the physical assets. They also must be given incentives to remain with the company for the long haul – otherwise, the utility runs the risk of acquiring assets with very short service lives, a dangerous and costly proposition for any asset, physical or human.

Human Capital as Key

Current financial accounting measures treat investments in people as costs, no different than raw materials. The financial accounting profession has long argued that since people do not meet the tests of an intangible asset set out by the U.S. Financial Accounting Standards Board (FASB), they cannot be regarded as an asset. In recent years, cost reduction has been considered the mark of

good executive stewardship and rewarded in the short term by Wall Street. Executives, pressured to cut costs across the board, had little alternative but to treat the workforce as a cost available for reduction.

Thinking of people as assets with corresponding investments, value and returns is a concept that executives may intuitively understand; in fact, executives routinely declare that “people are our most important asset.” But this is where intuition comes at odds with finance and accounting standards. For example, human capital could not be considered an asset unless it met the following criteria:

- It has productive capabilities;
- It is controlled by the company; and
- It was acquired through a defined transaction that gave the company control.

To resolve this conflict between human intuition and financial guidelines, it is necessary to clarify the definition of the “human capital” asset. People are, without question, the owners of their own human capital – their time, effort, energy and enthusiasm. However, when people invest their human capital in their work, it becomes an asset of the company. The company acquires this asset through the package of rewards (compensation, benefits and work environment factors) that it offers people in exchange for their human capital. Human capital, as an asset defined in this way, now satisfies executive intuition, business practicality and (at least in concept) meets the FASB standards for an intangible asset.[1]

However, rewards are not the only investment companies make in human capital. Other expenses associated with managing human capital typically include administration of human resources, recruiting, training, etc. These expenses are investments in the asset management of human capital and are not dissimilar from the concept of maintenance and repairs in the management of physical assets.

Asset Value

Assets require investment to generate value. Consider the value of a specific physical asset – a turbine generator owned by an electric utility company. Its “value” could be based on one of three characteristics:

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- Its purchase cost;
- Its sale price on the open market today; and
- Its production, i.e., the value of the energy that can be produced by it.

For a going concern (i.e., an operating utility), the third characteristic provides the truest measure of value. However, for accounting purposes, asset value is recognized as the first characteristic, adjusted over time on the balance sheet as the remainder of the purchase cost after depreciation is subtracted. The value of the second characteristic is applied to an asset in liquidation, not one in a going concern.

Shareholders are interested in going-concern value, not liquidated value. (When firms liquidate, shareholders are “last in line.”) Calculating this value requires evaluation of both the throughput – the ongoing output that has economic value – and the inputs that the organization’s assets convert to throughput. For a turbine generator, the value of the economic output is easy to compute; it is the kilowatt-hours produced times the price per kilowatt-hour the electricity market (regulated or unregulated) will pay for the power. The cost of the inputs includes the total expended on fuel, subcontracted services, etc., in the process of producing throughput using the asset.

Yet, it takes more than a turbine generator to make a kilowatt. There are two other critical assets required for the production function – technology capital and human capital. If one of the required sets of assets is missing, no energy is created and no revenue is generated, and the throughput (output that has value) of the system is zero. This is a critical concept: Assets have value because throughput has value.

Since physical, technology and human capital (the organizational assets) must perform in combination in a production function to transform inputs to throughputs, an overall equation for return from a going concern would use them in the following way:

$$\frac{\text{Throughput} - \text{Input}}{\text{Investment in Physical, Human and Technology Capital}} = \text{Return on All Organizational Assets}$$

The throughput minus the input is the value of the assets in a going concern provided the investment in assets and generation of value are “periodicity-matched” – i.e., the value is measured over the useful life of the assets. Depreciating and amortizing expenses is one technique for reducing assets to a one-year investment equivalent that tends to match the time frame for standard annual reporting. But human capital is not treated as an asset today. If it were, there would need to be an estimate of its useful life.

But what is the useful life of human capital? Remember, human capital is not people, but rather what people invest in their work. Therefore, the useful service life of any investment in human capital will always be bound by two parameters – the nature of the investment and the length of service of the employee.

ROI on Human Capital

When employees go through certain types of training, or when executives are relocated, companies make large investments expected to pay off over time. The payoff comes from having the human capital performing well in the business operation in combination with the other assets. Because the assets’ value is based on their performance *in combination*, the value of human capital is derived from the value of all the assets.

The theory of production functions states that for optimized assets, it is not possible to trade a dollar of investment in one asset for a dollar of investment in another to get a better return. Technically, when this condition exists,

value can be assigned in proportion to the investment. This decomposition of value can be helpful to making investment decisions for human capital when the production function is fixed, i.e., the work intended to be performed by human capital (versus that performed by plant and equipment) is clear. The value of this work in an optimized production function is:

$$\frac{\text{Investment in Human Capital}}{\text{Investment in Physical, Human and Technology Capital}} \times (\text{Throughput} - \text{Input}) = \text{Value of Human Capital}$$

To finish with a calculation of return on investment in human capital (ROI-HC), the investment in human capital alone needs to be isolated from the numerator. Dividing the value of human capital calculated above by this investment in human capital produces the ROI-HC.

Today’s power plants generally perform, in historical context, at high efficiencies and low cost. The performance of transmission and distribution systems lies in a similar historical context – the huge investments in recent years in analysis and IT have brought the industry to a higher standard of performance than ever. So while the optimized asset assumption may not be strictly accurate (or else the discipline of asset management would have been retired by now!), the concepts underlying these equations are reasonable assumptions for use in modeling human capital’s part in utility asset valuation today.



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Once ROI-HC is calculated, the natural next question from boards or investors will be, “Is this good?” The answer lies in benchmarking where the company stands with respect to its peers. The value of a company and the strength of its management team are determined by what decisions they make in the context of the industries in which they operate. Investors want to own shares in companies that have management teams that understand the trends, make keen investments and position themselves for the future.

While companies in the lowest quartile in ROI-HC have much work to do, even those in the top quartiles may find their performance falling precipitously should they fail to manage the transition of their current aging workforce. Putting investments in the context of their value is critical to knowing how much return a company is generating. Putting their ROI-HC in the context of industry performance is critical to knowing if the return is good.

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Failure to plan for this transition will likely result in a workforce that will be under-equipped to perform their jobs, less productive and more error-prone. Human errors or inefficient activities that lead to generation, transmission and distribution losses have clear financial implications. When the increased likelihood of such problems is considered, a case can be made that the

The Aging Workforce

Dozens of articles have been published about the graying workforce in the United States. A recent U.S. Department of Labor study put some hard numbers around this looming workforce problem. Between 2002 and 2012, the Labor Department projects:

- The percentage of the civilian workforce older than 55 – considered the age at which retirement is a consideration – will increase from 14 percent to 19 percent;
- The number of workers in the 55+ age group will increase by nearly 50 percent (20.7 million to 31.0 million);
- The number of workers in this age group will be 78 percent higher than the total increase in the workforce over this period of time; and
- The increase in workers 55 and older will actually exceed the increase in working-age people between 16 and 55 by 3.3 million – the older group will grow at a rate nine times faster over this period.[2]

The utility industry has only recently begun to evaluate the impact on its operations. Initial studies indicate that utilities may be hit even harder than the general population by workforce attrition. A UTC (United Telecom Council) Research study of the utility workforce (including telecom workers) published in 2004 determined that nearly half of this workforce is over the age of 45.[3] (For comparison, note that the Labor Department numbers show that for the overall workforce, the percentage of the workforce over 45 is 36.8 percent.) A study completed in 2004 by the Nuclear Energy Institute showed that, within the nuclear power sector, three-quarters of the workforce is over 43, and at least a quarter of these workers – approximately 16,000 – are expected to retire by the end of the decade.[4]

Some internal studies by utilities show similar alarming results. In an interview conducted by IBM in 2004, the workforce planning manager for a large public utility revealed that, after years of aggressive workforce reduction and minimal new hiring, the utility discovered at the end of the 1990s that average age of craft, engineering and operations staff was 47 – and their average retirement age historically had been around 55. This served as the impetus for an extensive (and award-winning) effort in their nuclear division to make bold moves to rectify the problem.[5]

The UTC Research study noted that while the vast majority of utilities were aware of the problems these trends posed, less than one-third had formal workforce-retention programs in motion. These numbers imply that focus in this area needs to be increased to forestall serious problems.

revenue at risk from the potential loss of talent will dwarf the investments in successfully managing the transition of a retiring workforce.

Each organization faces a critical strategic choice: continue to rely on the strategies and tools of the past, or recognize the competitive advantage that can be gained by developing strategies to manage the new reality. Historically, utility investors have placed a high value on stability and predictability. More recently, however, utility investors have also been conditioned to expect ever-decreasing cost structures – and there is little question that effective workforce renewal programs will cost money in the short term. How effectively the long-term vision is communicated to investors will be crucial to assuring that the strategic and financial benefits of good long-term programs are not hijacked by the desires of short-term investors.

With new, more relevant measures, executives can lay out a clear and compelling case for investments in human capital. Furthermore, managing expectations conveys a command of the sources of long-term value for the company. After all, investors looking for long-term sustainable value vis-à-vis other investment alternatives are attractive shareholders for a utility. Demonstrating that proactive steps are being taken to mitigate risk may not only show the value of management's foresight and judgment, but may spark investors to ask questions of other companies. Savvy executives must ask themselves, "What will we say when this dialogue starts?"

Conclusion

There is no question that an aging workforce presents challenges no less critical (and arguably more critical) than an aging turbine generator. It has strategic and financial impact, and utilities cannot wait to see how things play out. This workforce transition will happen in the next five to seven years, hitting some segments (e.g., nuclear generation, transmission and distribution line maintenance) especially quickly.

The workforce renewal crisis presents utility executives with a serious dilemma, but it also presents them with a golden opportunity. Visionary executives who choose to manage human capital as an asset rather than a pure cost may discover that applying disciplined techniques to human capital can yield the same dramatic productivity improvements they have seen with physical asset management. Since productivity is rooted in returns on investment, the performance of any asset that is managed with an outdated strategy can be improved with a new focus on its strategic function and impact on financial value. Achieving that understanding and applying it to the impending workforce transition is the opportunity within the crisis that successful executives of the next decade will exploit. ■

Endnotes

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