

# Utilities Incremental gains through EPPM

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## Introduction

It seems the utilities industry is being attacked from all sides. The decline of coal-fired power plants, the rise of renewables, finalization of the nation's first carbon regulations, and the proliferation of distributed energy resources, to name a few, are all pressuring utilities to adjust their business models in order to operate in a new energy ecosystem.

According to PwC<sup>1</sup> 97 percent of utilities executives from 70 companies in 52 countries expect a medium or high amount of market disruption by 2020 – if it hasn't already happened in their region.

These trends are changing the way utilities have traditionally done business and, in turn, affect investments. The penetration of renewables is having a considerable effect on market pricing, according to PwC<sup>2</sup> and the increasing significance of distributed generation has growing implications for centralized assets. Long-term payback horizons are becoming much more uncertain.

The U.S. has already seen a number of power companies that are facing bankruptcy, according to PwC. They made big choices, and those big choices failed. Utilities must assume some risk to move forward, but it must be done while keeping hold of the shareholder value that has already been created.

Transmission and distribution systems for electricity, water and gas are also in flux. Traditional power system planning methods and tools are becoming less effective in today's power system environment, according to the Electric Power Research Institute. Transmission owners and operating need to plan for future demand growth, which is more uncertain with increasing levels of distributed resources.


The natural gas distribution industry has performed erratically over the past five years.<sup>3</sup> The shale gas boom resulted in a flood of domestic natural gas production, which, when combined with a shortage of pipeline infrastructure and export facilities, triggered a collapse in natural gas prices over the same time. In the coming years, natural gas production is projected to slow, while infrastructure investments will boost pipeline and export capacity.

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1 PwC, "Global Power and Utilities Survey" 2015.

2 PwC, "Strategy, financing and customer engagement in a new energy world," May 2016.

3 IBISWorld, "Natural Gas Distribution in the US: Market Research Report," June 2016.



In the current environment, choosing projects that yield incremental gains represents a viable risk option for utilities. A comprehensive enterprise project portfolio management (EPPM) solution is critical for utilities to help them gain a clearer picture of the current situation and identify areas of opportunity, lower risk and spot opportunities for innovation to improve their current situation and portfolio outlook -- for both the short and long-term.

## The Benefits of EPPM in Achieving Incremental Gains

Companies can potentially lower costs and accelerate revenue in seven key areas to achieve incremental gains.

### Accelerating Revenue

As companies assess their portfolio, these areas should be considered:

1. Modeling & analyzing portfolios

Utilities need to plan capital expenditure carefully and prioritize projects that will deliver. 'Easy capital' is a thing of the past, and investments in generation, transmission and distribution are receiving heightened scrutiny from shareholders and regulators. Utilities need to demonstrate that the opportunities they pursue will deliver the greatest possible returns.

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*Savings of 10% can be made on capital projects budgets by adopting up-front strategic planning. - McKinsey 2013*

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A powerful enterprise project portfolio management (EPPM) analytics tool provides the forecasting capabilities utilities need to identify, prioritize and select the right generation, transmission and distribution (T&D), operations and decommissioning projects. Scenario analysis and decision optimization deliver the information required to predict likely outcomes and determine the probability of success. The result: Investments that make sense and projects that pay off. Conversely, EPPM helps utilities decide which projects to temporarily or permanently halt.

The portfolio should not only look at the delivery of capital projects but also all Opex costs, including outage/online maintenance and decommissioning activities, which have significant impact on the capital available within a utility.

2. Assessing portfolio risk


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*Only 30% of companies perform quantitative risk analysis to calculate contingencies. – KPMG 2016*

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*Companies in the top 20% of risk management maturity delivered three times the level of EBITDA when compared to companies in the bottom 20%. – EY 2011*

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When investing in new projects, risk management is a key factor that should be considered from the moment a project is identified right through to its completion, with the understanding that risks are modeled differently at different phases of a project's life.

In addition to the management of risk logs and the more complex Monte Carlo simulations, utilities must effectively manage outcomes in order to deliver projects most efficiently. Here, the ability to manage mitigation plans plays a key role.

From a portfolio perspective, utilities need to understand the risk exposure across the portfolio at any given time, and the ability to manage that funnel is a key requirement.

### 3. Dynamic monitoring & reporting

Utilities must take note of the way their organizations have adopted big data and detailed analytics, and then adopt them within the delivery of projects and the management of their entire project portfolio.

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*80% of utilities will have advanced analytics capabilities in place by 2018. – IDC 2016*

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With EPPM, capturing project delivery data has never been easier. Companies now have the ability to capture information from the global supply chain through SaaS-based project management solutions. Project staff in the field can now deliver up-to-the-minute data via mobile solutions specifically designed to work on tablets and smart phones.

Data can be captured and then translated into meaningful analytics that can be provided to stakeholders -- both internal and external. This information will enable faster, more efficient and therefore cost-effective decision-making.

### Driving Down Costs

After an organization determines what projects will move forward, those projects must be executed efficiently and in a low-cost way. The following practices should be considered for improving quality while keeping costs under control:

#### 4. Improving collaboration and compliance

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*82% of companies expect greater owner/contractor collaboration over the next five years. – KPMG 2016*

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Operational excellence helps to drive down costs and improve efficiencies. Utilities need to improve productivity while improving quality. They also need to ensure that well-defined standard operating procedures are supported, automated and complied with, not just within their own organization but also along the supply chain. Document control through standardized procedures is also essential to effective and efficient project delivery.

Governance measures like these ensure that all parties are alerted to actions, including non-compliance, and are driving efficiencies throughout the project's life.



## 5. Managing change

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*Project-intensive industries report an average of 15% increase in major capital projects through change orders. – McGraw-Hill Construction 2011*

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Utilities work with a significant number of stakeholders, including contractors and suppliers, while delivering both capital, outage or decommissioning projects. Change orders are inevitable, yet companies still struggle with the ability to capture change and manage all the subsequent documentation that can help them maneuver through these curves in the road. Standardizing and automating processes can help organizations account for the impact of both financial and scheduling changes across the portfolio of projects.

## 6. Integrating supply chains

Utilities need to find and capture best practices and extend them wherever they can add value. Continuous improvement in all areas of the organization, including back-office functions, is critical to enhancing processes and making them more efficient.

Companies that can manage all resources, including labor, equipment and materials, across an organization's integrated portfolio plan can also help drive strategy in determining procurement, human capital and contracting approaches. What's more, incorporating the integrated project plan with the supply chain ensures that resources are provisioned and delivered to meet the needs of the project,

## 7. Improving operations and maintenance

Utilities must maximize online availability of their assets to deliver electricity, water and gas while minimizing operating expenses. Companies that can effectively plan and execute shutdowns/outages and routine maintenance also improve the operational efficiency of their assets and can better meet the goals of the organization.

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*Improved planning of maintenance activities delivers 10% savings. – McKinsey 2013*

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To this end, enterprises are looking at a number of areas to enhance efficiencies and drive down costs, including long-range planning, scope control, resource and risk optimization, efficient field execution and change control. Typically, the focus in these areas is to automate the very manual processes that exist in most operations and maintenance organizations. This further enhances efficiencies and also provides a heightened level of governance over all operations and maintenance activities.

## The Solution

Oracle Primavera Enterprise Project Portfolio Management provides project leaders and board-level stakeholders with a single version of the truth, real-time visibility of all relevant information from start to finish, and integration of project and program resources.



Additionally, utilities get immediate access to key performance indicators, cost and schedule alignment, and detailed audit trails of all transactions. As a result, project issues are easy to identify, corrections can be made mid-course and resources can be quickly allocated effectively and efficiently.

## Conclusion

Enterprise project portfolio management is mission critical to the utilities industry and is driven by billions of dollars in capital investments. These large-scale projects, if they fail, have an impact on their company and their share price. Incremental gains are the key to managing risk in this rapidly evolving industry. EPPM provides that full end-to-end capability to support the capital asset lifecycle – from planning, building and construction, operation and maintenance, to decommissioning.



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