

# The Utility Construction Odyssey

Preparing for the Journey with Trump as Constructor in Chief

By Mark Bridgers and Dan Campbell

*“Sing in me, Muse, and through me tell the story of that man skilled in all ways of contending, the wanderer, harried for years on end, after he plundered the stronghold on the proud height of Troy.”*

Opening stanza of *The Odyssey* by Homer

Donald Trump will shortly be sworn in as the 45th President. Like a victorious Odysseus, fresh off the sacking of Troy, he will embark on a four-year odyssey ... perhaps as challenging as Odysseus' journey home. Like Odysseus and his crew, there is both worry and optimism as we board the ship of state and set sail. Will our “Constructor in Chief” build jobs

through infrastructure spending or strand us with the forgetfulness of the lotus eaters? Strap yourself to the mast because we are in for quite a voyage.

Trump inspires optimism in support of the construction industry as a job creation engine through energy policy, infrastructure rebuild, etc. We still face many challenges, the greatest of which is the lack of skilled workers and supervisory personnel. We do, however, have high-paying jobs, clear career progression, superior skill development and training, innovative technologies and an entrepreneurial culture. Each aspect is largely unknown and unobserved outside of our industry.

It is time we stopped hiding our light under a bushel and sing like the sirens to draw talented individuals to the shores of our industry.

## Utility Spending Forecast

In Exhibit 1, 2017 growth accelerates through the end of the forecast time period and the electric and gas transmission and distribution (T&D) sector remains the primary contributor. One caveat: the general economy has expanded since 2010, and we are approaching the seventh year of this expansion when the typical business cycle runs five to seven years. All cycles end with a recession, the only question is when. We



forecast this recession after 2018 making this one of the longest, albeit slowest, economic growth expansions that the United States has experienced.

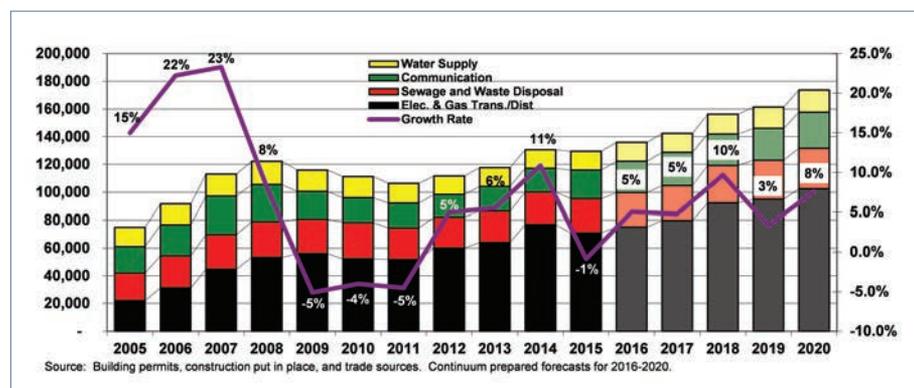
### Transmission & Distribution – Electric, Gas & Liquid Spending Forecast

In his journey home, Odysseus encounters Aeolus, ruler of the winds, who offers two great gifts: the north, east and south winds within a sack and the blowing west wind to guide Odysseus and his ships home. The United States received a similar gift in available shale oil and gas that is transforming the power generation, electric

#### Exhibit 1

#### Utility Construction Put in Place Historical Figures and Forecasts

Millions of current dollars



T&D, pipeline and distribution markets. The change since 2005 is substantial — not just in total spending but also in how the money is spent. In combination, the T&D markets for both electric and gas are the healthiest of all utility segments and will offer the greatest upside potential over the forecast timeline. In Exhibit 2, these markets are shown accelerating in spending growth driven by an expanding economy, electric reliability concerns, asset replacement, gradually rising oil prices through 2017-2019 and low-cost and stable natural gas prices. The likely energy-friendly policies that Trump will propose will continue to serve as a growth engine for this market.

### Electric T&D

The electric T&D market continues to improve, and we anticipate faster construction spending growth for both T&D. Transmission spending accelerated in 2012/2013, and is expected to peak in 2017/2018. Distribution spending also accelerated during 2012/2013 and we do

not see a short-term peak in this spending category. We expect it to continue to grow at a slightly faster rate until the 2020 time period. In addition, we anticipate the continued undergrounding of infrastructure as part of protection, hardening and beautification programs around the United States.

### Gas Distribution and Pipeline

The gas distribution and gas/liquid pipeline market grew rapidly until the 2014/2015 oil price collapse. A significant contraction during 2015/2016 in the liquid pipeline construction followed with no impact on the gas distribution market. The 2016 slow rise in the price of oil, the OPEC production agreements, support from Trump for energy infrastructure and a more aggressive and hopefully long-term energy policy will improve the gas/liquid pipeline market. The improvement, however, will not be realized until 2018/2019 due to the engineering, planning, land acquisition and

permitting timeline associated with pipeline infrastructure.

The gas distribution market showed slowing growth in 2015/2016, and we expect this market to reaccelerate in 2017/2018 with a combination of accelerated asset replacements, general modernization and integrity related programs. Looking forward, we see shifts in the nature of the work that is occurring but no shift in total spending. This shift will require contractors to take a hard look at their service offerings. Specifically, to better understand where their customers are headed and then decide if they want to follow customer spend patterns or potentially search for new customers with whom their current capabilities fit.

### Water Supply and Sewage and Waste Disposal

#### Spending Forecast

On the island of Circe, Odysseus' men were turned into pigs by Circe the sorceress, yet Odysseus was saved by the magical herb moly that protects him from Circe's spell. Will this type of magic be necessary to improve the water/sewer spending trajectory, or will it be as simple as Trump helping to push a more aggressive funding of infrastructure replacement?

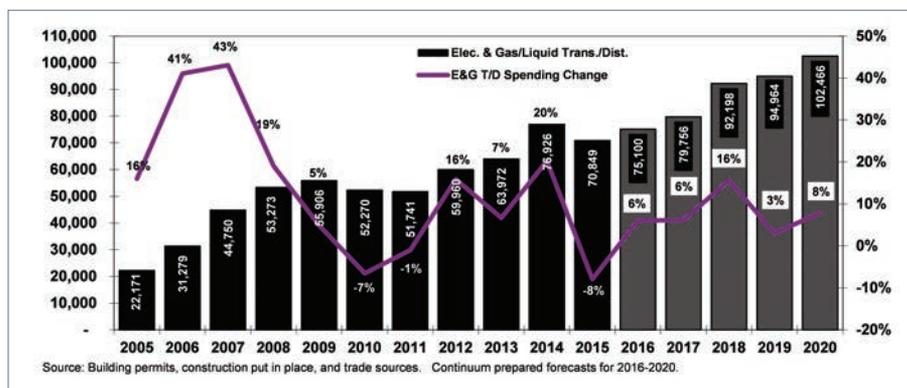
The water/wastewater market has stabilized since the 2008-2010 economic disruptions with improving state and local budgets and a consistently growing housing market. Exhibit 3 demonstrates continued and accelerating growth through the forecast period with a modest push from increased federal funding of infrastructure replacement by 2020.

#### Water/Sewer Funding Sources

Additional federal funding is one funding source shown on Exhibit 4. Federal funding for water and wastewater infrastructure peaked in 1976 and has declined dramatically. Given the current federal budget deficits and public debt, we cannot count on federal funding as a long-term solution. The magnitude of the need far exceeds the ability and willingness of public authorities to raise taxes and rates to support the 150,000 U.S. water systems and 16,000 sewer systems. Further complicating this situation is that local governments now hold more than \$1.7 trillion in long-term debt and many cities simply do not have

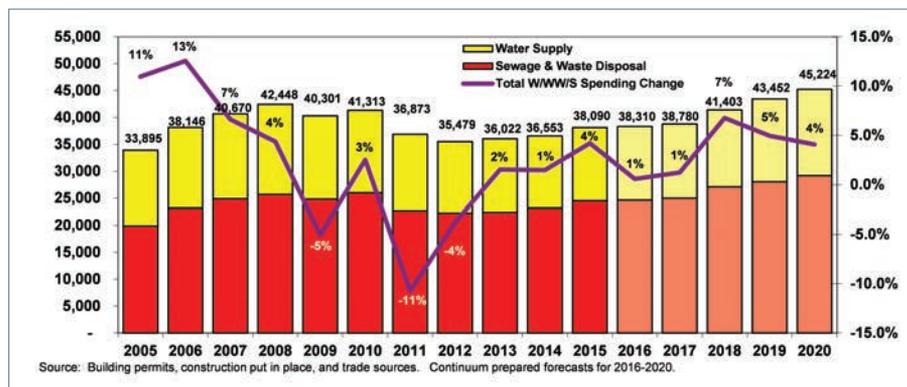
### Exhibit 2

Electric/Gas/Liquid T&D Construction Put in Place Historical Figures and Forecasts  
Millions of current dollars



### Exhibit 3

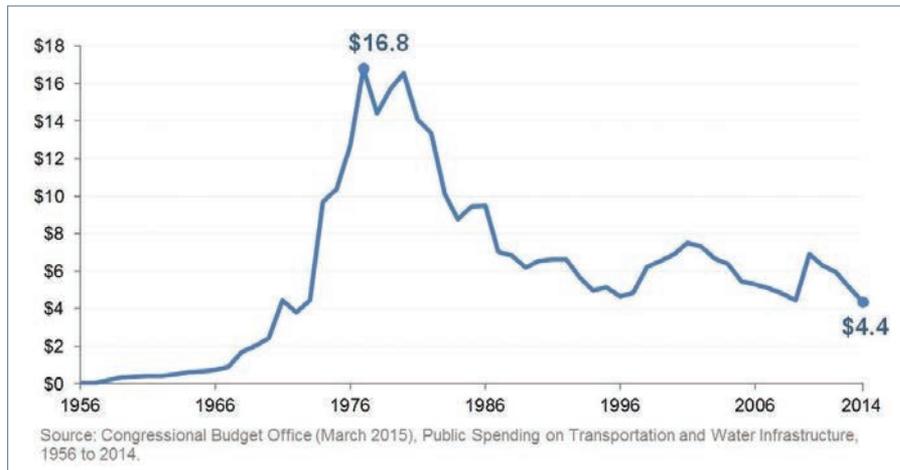
Water Supply, Sewage and Waste Disposal Construction Put in Place Historical Figures and Forecasts  
Millions of current dollars



## Exhibit 4

### Federal Spending on Water/Wastewater Infrastructure 1956-2014

Billions of 2014 dollars



the capacity to take on additional debt.<sup>1</sup> This leaves only one path which is the use of Public, Private, Partnerships (P3) that mimic the raising of taxes and rates but can be plausibly denied by public servants. We anticipate the acceleration of these tools to fund infrastructure replacement and system reliability over the next 20 years.

## Communication

### Spending Forecast

The telecom construction market is the most volatile of all the utility construction markets with significant swings in spending from peak to trough. Similar to the violence Odysseus faced from the Laestrygonians, that included cannibalizing his men and destroying 11 of his 12 ships, this market can turn on you in a moment and devour or destroy the unwary contractor.

The last peak in spending occurred in 2007/2008, and a new peak is expected to be seen in the 2017/2018 time period. We expect the market dynamics will yield a more stable market from a spending standpoint over the next cycle than was exhibited in the last. With that said, the recent announcement from Google has curbed some forecasters' expectation of the growth left in this current market cycle.

*"Alphabet, the parent company of Google, will curb the rollout of its high-speed fiber-optic network and will reduce staff. In addition, Craig Barret, chief executive of Access, the Alphabet division containing Google Fiber, will step down."*<sup>2</sup>

The remainder of the market appears committed to their announced plans:

- "AT&T has touted plans to expand its GigaPower broadband service to some 12.5 million homes and businesses by the end of 2019."<sup>3</sup>
- "Verizon touted plans to expand its FiOS services to Boston and, perhaps, other East Coast cities."<sup>4</sup>
- "Comcast has been expanding its high-speed internet network to small and medium-sized businesses."<sup>5</sup>
- "Connect America Fund program described a \$150 million to \$200 million annual opportunity through 2020 through AT&T, Frontier Communications, CenturyLink and Windstream."<sup>6</sup>

### Activity Driver

In his travels, Odysseus faced an inexorable force named Charybdis, a strong violent whirlpool with teeth, that consumed all that passed. In the telecom sector, there are a host of factors that impact capital construction, and there is one unstoppable force above all others: IP traffic and the mobile, data and video streaming demand. This factor is the underlying force that demands ever more and faster infrastructure to satisfy consumer needs. The next wave of speed activity is associated with the implementation of 5G networks to begin around 2020.

## Overall Conclusions

Will the Trump ship of state and our Constructor in Chief bring us home

safely, or will we wander like Odysseus and his crew only to face endless challenges in the utility construction sector? We are on the side of optimism and that the next two- to four-year spending will be several of the best in the underground and overhead utility sectors.

Our biggest challenge is having a skilled workforce. Aside from the work by NUCA, we are aware of two substantial efforts to help meet this challenge led by the Underground Construction Workforce Alliance (UCWA), an industry collaboration, kicked off by the Distribution Contractors Association and the Power and Communication Contractors Association effort titled "Who Will Do The Work?" In both cases, these groups are taking a local focused effort to design solutions to meet the workforce demands in high priority shortage markets.

Homer closes *The Odyssey* with the following stanza:

*"Athene called out to Odysseus: ...hold your hand! Stop fighting your countrymen ... Then Athene...established peace between the two sides"*

Like Athena, who brings peace, alignment and collaboration, we trust that Donald Trump as our Constructor in Chief will achieve the same result and lead an expansion in utility construction activity.

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<sup>1</sup> Kane, Joseph, Brookings, Investing in water: Comparing utility finances and economic concerns across U.S. cities, Dec. 14, 2016.

<sup>2</sup> Wakabayashi, Daisuke, *New York Times*, Google Curbs Expansion of Fiber Optic Network, Cutting Jobs, Oct. 25, 2016.

<sup>3</sup> Krause, Reinhardt, *Investor's Business Daily*, Dycorn Digs Up Growth From AT&T, Verizon, Comcast Broadband, Aug. 18, 2016.

<sup>4</sup> Krause, Reinhardt, Ibid.

<sup>5</sup> Krause, Reinhardt, Ibid.

<sup>6</sup> Krause, Reinhardt, Ibid.