Nuclear’s Fork in the Road

Growth

Decline
Nuclear Grows Globally

- 60 Reactors Under Construction
- 20 in China!

73% Increase Forecast in Worldwide Nuclear Generation

2015 Actual: 2.6 Trillion kwhr
2040 Forecast: 4.5 Trillion kwhr
But Facing Serious Decline in the U.S.

<table>
<thead>
<tr>
<th>Nuclear Power Plant</th>
<th>Years</th>
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<tbody>
<tr>
<td>Crystal River</td>
<td>2010</td>
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<tr>
<td>Vermont Yankee</td>
<td>2014</td>
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<td>Kewaunee</td>
<td>2013</td>
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<td>Ft. Calhoun</td>
<td>2016</td>
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<td>Palisades</td>
<td>2018</td>
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<td>Pilgrim</td>
<td>2019</td>
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<tr>
<td>TMI</td>
<td>2019</td>
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<td>Oyster Creek</td>
<td>2019</td>
</tr>
<tr>
<td>Indian Point</td>
<td>2021</td>
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<td>Diablo Canyon</td>
<td>2025</td>
</tr>
<tr>
<td>Others</td>
<td>??</td>
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U.S. New Builds In Serious Trouble...

Virgil Summer Units 2 & 3

Vogtle Units 3 & 4
Commercial Obstacles Mounting

Flat Revenues, Price Competition

- Electric Demand Growth At All Time Low
- Natural Gas, Renewables Disrupting Market
  - $25 MW-hr vs. $35 MW-hr
- Costs Increases - 28% in Last 12 Years
  - Regulation
  - Obsolescence
  - O&M, Fuel
Conversation with a Utility Executive:

• “From a shareholder perspective, how can I justify a recommendation to continue to invest in a facility when facing a forecast of declining returns while there may be other more profitable uses of capital?”

• “How does one retain and attract talent going forward when there is a signal that nuclear may not enjoy full support?”
U.S. Nuclear Leadership, If Lost, Won’t Return

Countries Now Engaged in Advancing Technology

- China
- Russia
- Korea
U.S. Industry Now At a Critical Turn...
Can We Stay on The Road to Success?
Policy Initiatives Underway

• Legislative Actions
  • Illinois
  • Ohio
  • Pennsylvania
  • New York
  • Connecticut
  • New Jersey

• Fair Treatment of Nuclear’s Contribution
  • Employment > 450,000
  • Community Economic Support
  • Environmental
    63% of U.S. Carbon-Free Generation
Cost Efficiency Initiatives

- NEI – *Delivering the Nuclear Promise*
  - Initiatives Focused On Better Efficiency
  - Shared Among Members
  - Bulletins Issued to Date
    - Identified > $650 Million Savings
    - 95% Implementation Across Membership

Cost Improvement – How Can We Go Deeper?
Looking Deeper Beyond Efficiency

“The electric light did not result from continuous improvement in candles.”

Oren Harari
Did We Miss Something Along the Way?
Examining Our Current Position...

We’ve Come a Long Way in the Past 40 years... Much has been achieved on Path to Excellence...

But, Let’s Consider....

Have We Gone Too Far in Our Search for Excellence...?

Has The Focus on Efficiency Missed the Focus on Effectiveness?

.........and do we find ourselves on the road named “Excessilence”?
Today’s Panel Discussion

Are all our practices effective in supporting safe production of nuclear fueled energy?

• Regulatory Practices?
• Industry Practices?
• Utility Practices?

• What could we change?
• What could we “stop” doing?
• How Could We “Back Up”?
“When You Come to Fork in the Road, Take it!”
Yogi Berra