

Nuclear's Fork in the Road



Nuclear Grows Globally



➤ **60 Reactors Under Construction**

➤ ***20 in China !***

73% Increase Forecastin Worldwide Nuclear Generation

**2015 Actual:
2.6 Trillion kwhr**



**2040 Forecast
4.5 Trillion kwhr**

But Facing Serious Decline in the U.S.



<i>Crystal River</i> 2010	<i>SONGS</i> 2012
<i>Kewaunee</i> 2013	<i>Vermont Yankee</i> 2014
<i>Ft. Calhoun</i> 2016	Palisades 2018
Pilgrim 2019	TMI 2019
Oyster Creek 2019	Indian Point 2021
Diablo Canyon 2025	Others ??

U.S. New Builds In Serious Trouble...



Vogtle Units 3 & 4

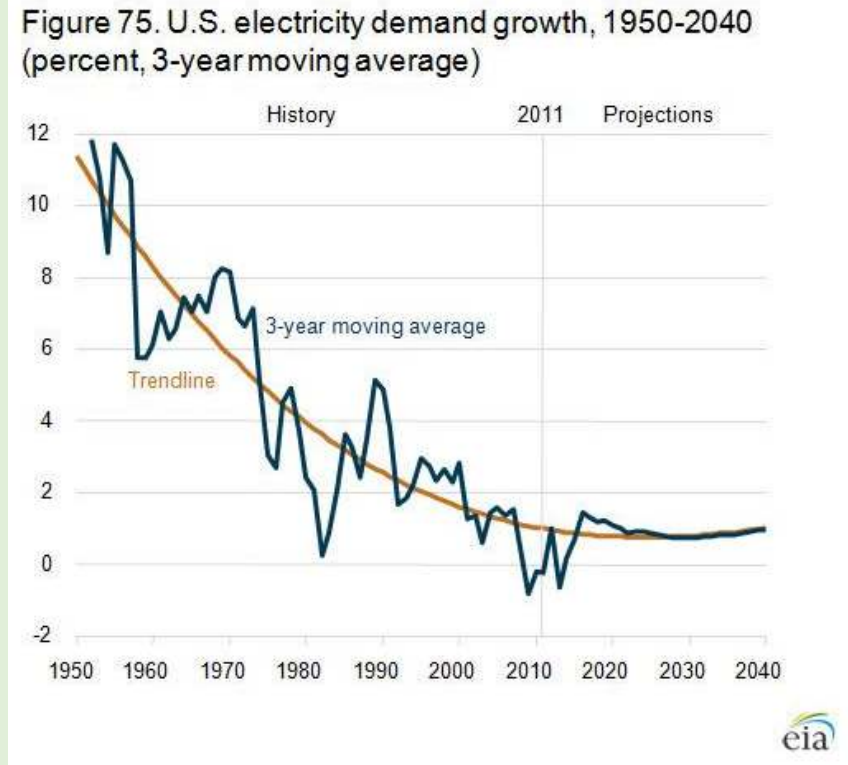
Virgil Summer Units 2 & 3



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**



No Easy Choices, Lasting Implications

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?”*

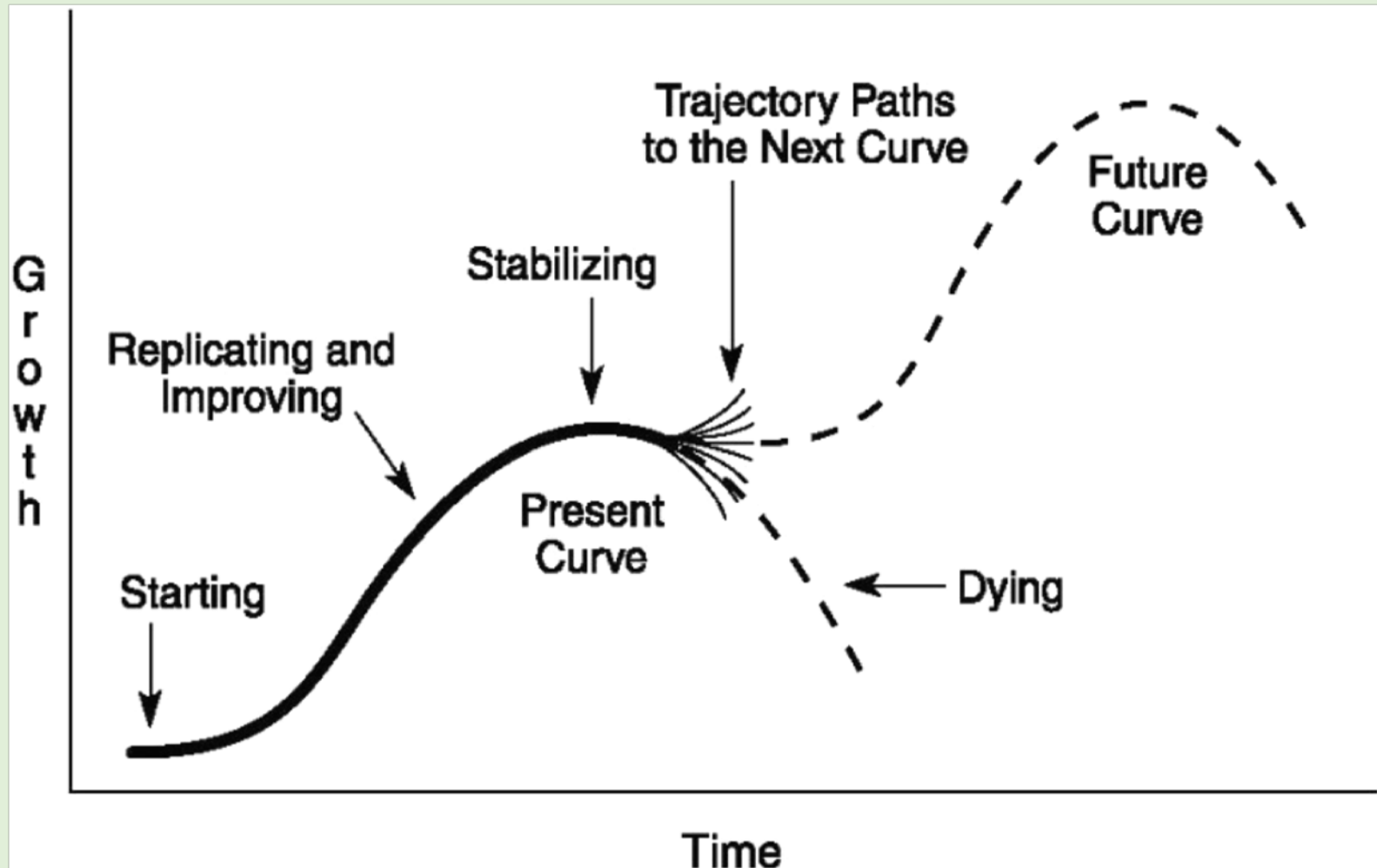
U.S. Nuclear Leadership, If Lost, Won't Return



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 ?



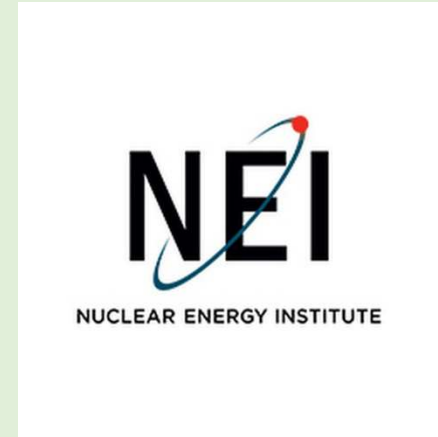
Policy Initiatives Underway

- **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



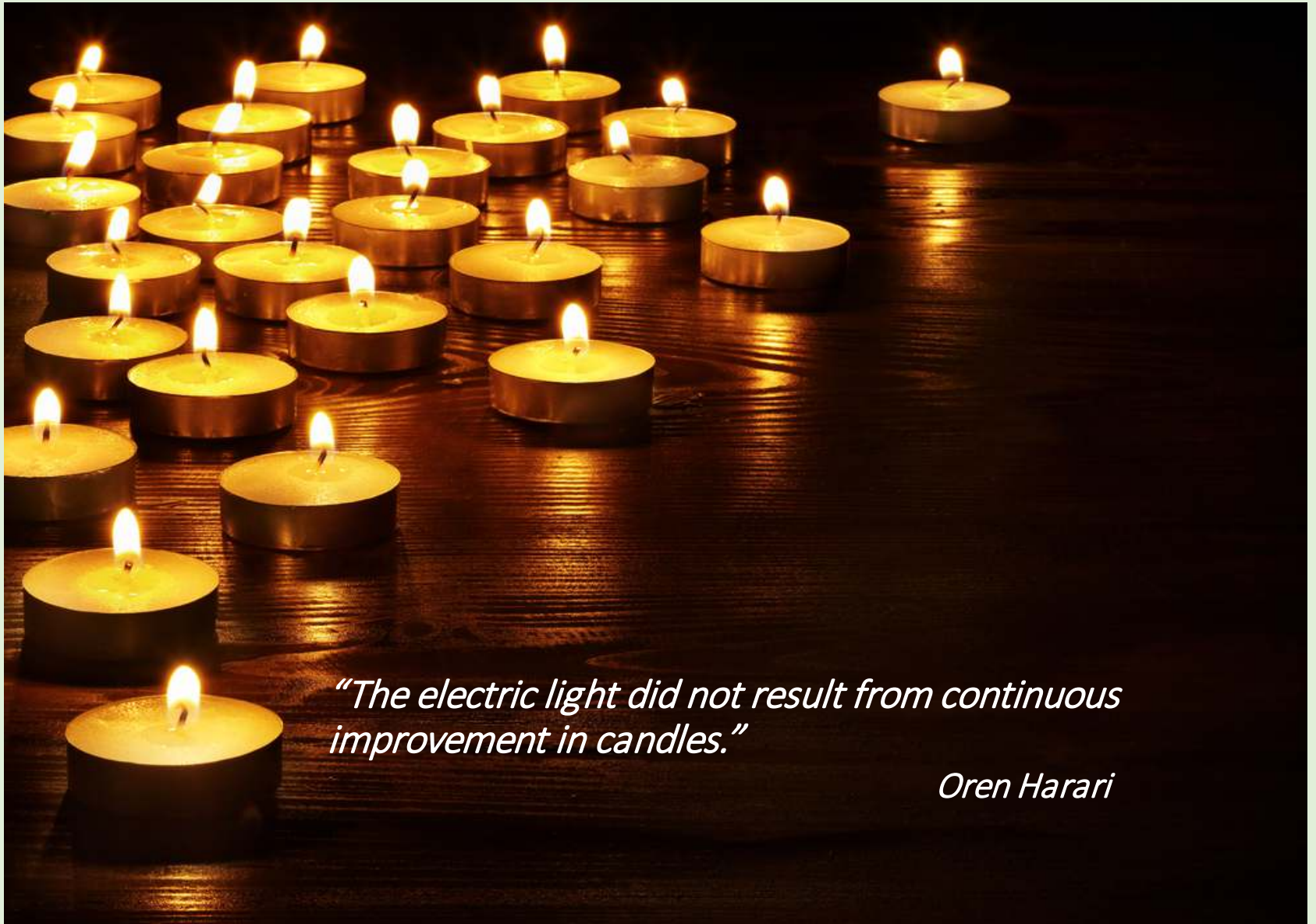
Cost Efficiency Initiatives



- **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?**
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- **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