



# ***National Interest Electric Transmission Bottlenecks***

***July 14, 2004***

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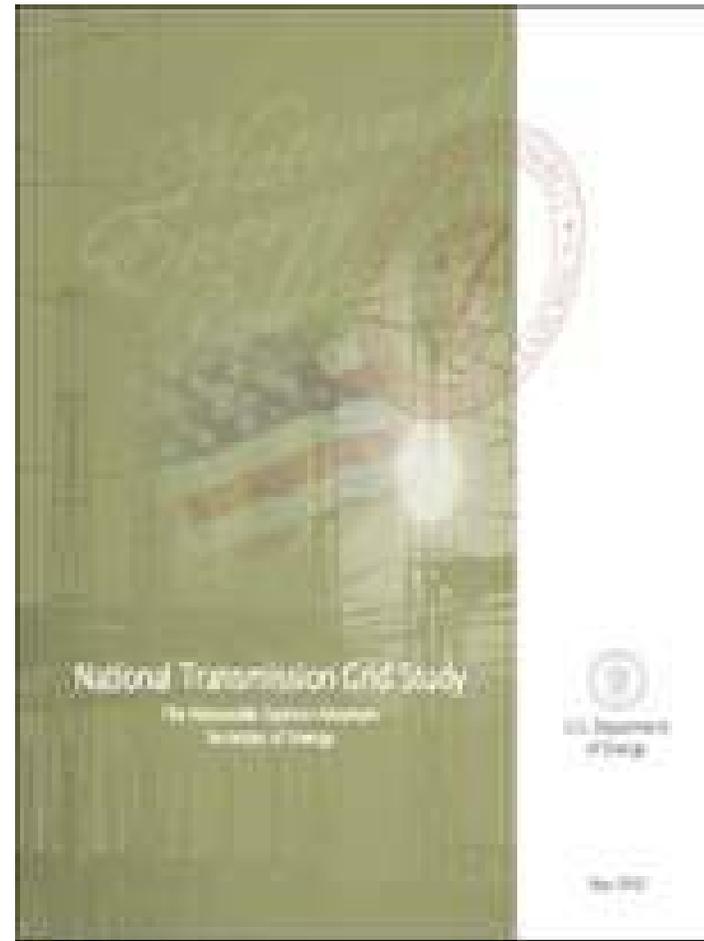
***Office of Electric Transmission and Distribution  
U.S. Department of Energy***





# Why We're Here

- To follow up on the recommendation in the NTGS that DOE identify NIETBs and aid in mitigating them
- To begin a dialogue about how to shape the NIETB process to make it add value
- To understand better data needs and availability



# What We'll Discuss Today



- **The NIETB concept**
- **Criteria and methods for identifying NIETBs**
- **Ways to add value to existing transmission planning and approval processes – nationally, regionally, and for States**
- **Data needs and availability**
- **Possible “paths forward” for the US DOE to partner with stakeholders on NIETBs**



# Blackouts Are Very Expensive!

Texas '03

US-Canada '03

Northern California '01

Detroit '00

San Francisco '00

New York '99

***Cost of Power  
Disturbances: \$25 -  
\$188 billion per year***

Atlanta '99

Delaware '99

Chicago '99

New Orleans '99

West Coast '96

# Aging Power Delivery Infrastructure

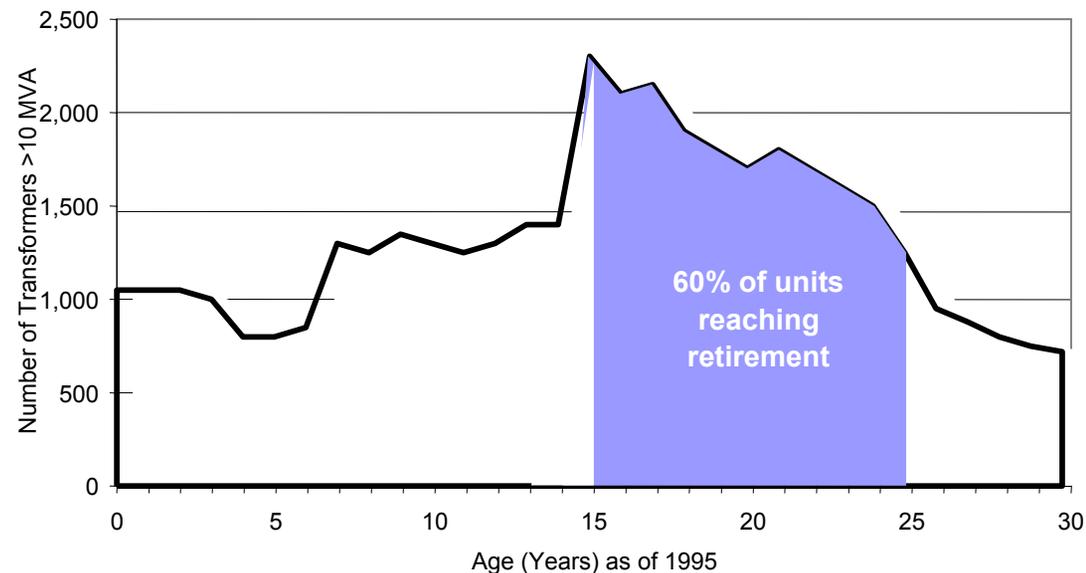


## Using TVA as an Example

- 64% of transmission structures are 25 years or older
- 73% of transformers are 25 years or older
- 53% of breakers are 25 years or older (31% are 35 years or older)
- ...for transactions that have grown from 20,000 annually in 1996 to 250,000 annually in 2001 in TVA's system alone

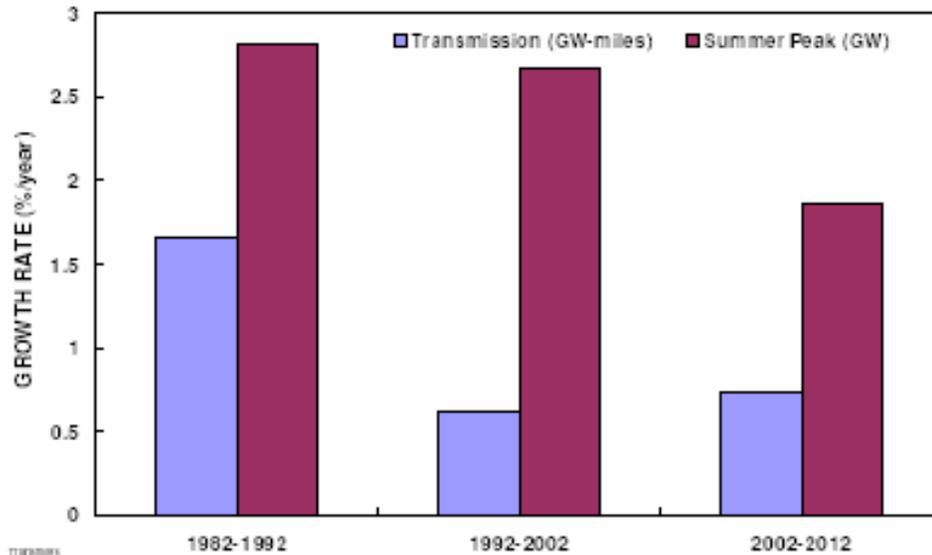
Source: Tennessee Valley Authority

## Age Distribution of Large Transformers

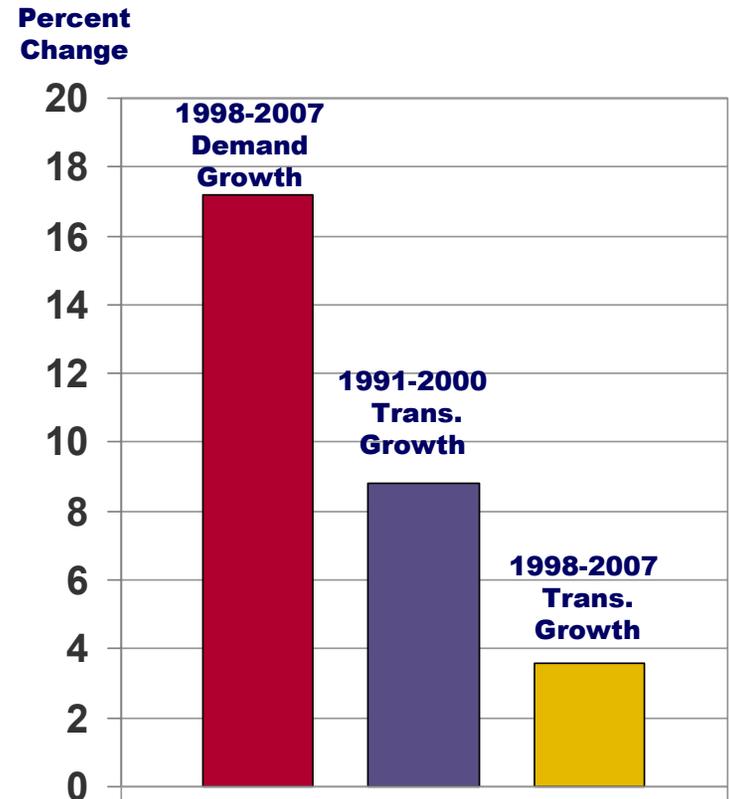


Source: Waukesha Electric Systems 1997

# Slow Pace of Transmission Growth



Source: Hirst 2004



Source: NERC

# Ground Rules for Today's Discussion



- Please consider both challenges and opportunities associated with a possible NIETB process and roles for the US DOE.
- Please focus on generic aspects of the NIETB concept ... discussions about solving specific bottlenecks will come later.
- Please be concise in your remarks ... time is short and we want to hear from as many of you as possible.
- Please be candid. There will be no attribution of individuals to ideas in any of the documentation.

# Next Steps



<b><u>Activity</u></b>	<b><u>Date</u></b>
<b>NIETB Workshop</b>	<b>July 14, 2004</b>
<b>Workshop Proceedings on Website for Public Review and Comment</b>	<b>August 16, 2004</b>
<b>Federal Register Notice Comments Due</b>	<b>TBD</b>
<b>Summary of Comments on Website for Public Review and Comment</b>	<b>TBD</b>

# Conclusions



***Thank you for  
participating  
today!***