Launching ERM: Experiences from Progress Energy

ERM Roundtable Discussion
North Carolina State University
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Progress Energy Overview

- $8.7B revenues
- $26.3B assets
- 24,000 MWs
- 2.8MM retail customers
- $11+B market capitalization
Why ERM?

- As a Fortune 250 Company, it is expected
- As a regulated utility, it is expected by stakeholders
  - ERM demonstrates risks are being identified and managed
  - Peer review – selected utilities

<table>
<thead>
<tr>
<th>Feature</th>
<th>Utility A</th>
<th>Utility B</th>
<th>Utility C</th>
<th>Utility D</th>
<th>Utility E</th>
<th>Utility F</th>
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<tbody>
<tr>
<td>Dedicated Risk Organization</td>
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<td>Risk Organization Size</td>
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<td>Enterprise Risk Focus</td>
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<td>CRO Direct Report of CEO</td>
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<td>Senior Executive Risk Committee</td>
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<td>Optimization of Enterprise Portfolio</td>
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<td>Risk Management Used for Capital Allocation</td>
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<td>Risk Management Used for Strategic Planning</td>
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<td>Enterprise VaR Produced</td>
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<td>Earnings at Risk Quantified</td>
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<td>Cash Flow at Risk Quantified</td>
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<td>Stress Testing Employed</td>
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<td>Diversified Risk Metrics Produced</td>
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<td>Regulatory Operations Included in Risk Assessment</td>
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Legend:
- ○ Little or no current activity
- ◇ Moderate activity or commitment to fully develop in the near future
- ● Well developed activity
Why ERM?

Need

- **1996-1998**
  - Policy needed for use of derivatives
  - Risk Management formed within Treasury

- **2001**
  - Focus moves to newly formed power & gas trading operation at Progress Ventures

- **2002**
  - Risk Management becomes Enterprise Risk Management
  - CRO hired
  - Focus expands to enterprise

- **2004**
  - Expectations - New Corporate Climate
What is ERM at Progress Energy?

- Align risk appetite and strategy
- Protect against unforeseen losses
- Ensure earnings stability
- Provide independent & transparent risk assessment
- Maximize share price & shareholder protection
What is ERM?

Governance

**Board of Directors**
- Ultimate responsibility for enterprise risk management process
- Aligns risk appetite with strategy

**Risk Management Committee / CRO**
- Primary risk policy making body
- Approves risk management guidelines
- Approves risk controls and limit framework
- Review significant risk issues

ERM Department
- Implements, administers and monitors compliance with risk management policies and framework
- Develops governance process
- Reports on aggregate risk profile

**Risk Management Subcommittee**
- Operate in support of RMC's overview
- Regular forum for vetting risk issues
- Facilitate dialogue between corporate staff and line management

**Audit Services**
- Validates controls
- Reviews risk management process
- Provides assurance to senior manage

**Business Unit Management**
- Owns identification, measurement, mitigation and reporting of risk inherent within business activities
- Manage within risk framework to achieve effective control environment while pursuing business strategies
- Responds to risk assessment
What is ERM?

Key Insights

- Risk management adds value
- Process – continual and evolving
- Risk should be viewed holistically
- Risk management is everyone’s responsibility
- Avoid opportunities that are not understood

*Companies make money by taking risk and lose money by not effectively managing it*
How did Progress Energy Implement ERM?

- Executive Sponsorship - CFO
- Limited focus initially – interest rate derivatives, a few earnings drivers, and credit
- Creation of a Risk Framework
  - BOD, Risk Management Committee, Sub-Committee Structure (BU’s, Credit, Finance, etc.)
  - ERM Dept. creation and link with Audit,
  - Development of Risk Guidelines with a Limit Structure
  - Re-writing Risk Guidelines with calibration
- Experienced and Diverse Personnel
How did Progress Energy Implement ERM?

- Risk Mapping
  - likelihood and severity
- Systems Development
  - Risk Analytics
  - Trading Deal Capture
  - Credit
- Benchmarking
- Internal Education
  - Describe ERM and its application
  - Unique approaches in discussing risk management
    - Road Trip
Education Example – Road Trip

Beginning: Raleigh, NC
Ending: San Diego, CA
Total of 2,690 miles
Aunt Clarice or Business Meeting?

- Business Meeting
  - If you attend this meeting you are pretty sure you will receive at least $750 in consulting work and you believe there is some chance you may get as much as $3,000 worth of work. You expect $1500

- Rich old aunt in Dallas
  - You heard from a family member that she mentioned giving $4,000 or more inheritance to those who have been good to her
  - You think there is a 50% chance you could get a $2000 inheritance if you stopped by and spent the day with her. It might be a lot more.
  - If you stop to see old Aunt Clarice you will not make your business meeting
**Vehicle Choice**

- **2000 Subaru (with 43,000 miles)**
  - Depreciation $400
  - 26 mpg, 10% chance of car repairs $1300
  - 5% chance of $250 speeding ticket

- **1973 Mustang (with 77,000 miles)**
  - Appreciation of $1200. San Diego premium for rag tops
  - 15 mpg, 50% chance of car repairs $1300
  - 30% of $240 speeding ticket, new tires $550 required
Education Example - Choices

1. Take the Subaru & visit Aunt Clarice
2. Take the Mustang & visit Aunt Clarice
3. Take the Subaru & attend the business meeting
4. Take the Mustang & attend the business meeting

You instinctively do risk management each day, but you may not properly consider the range of outcomes.
## Education Example - Summary of the Economics

<table>
<thead>
<tr>
<th></th>
<th>OPTION ONE</th>
<th>OPTION TWO</th>
<th>OPTION THREE</th>
<th>OPTION FOUR</th>
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</thead>
<tbody>
<tr>
<td><strong>Business Choice Revenue</strong></td>
<td>$4,000</td>
<td>$4,000</td>
<td>$3,000</td>
<td>$3,000</td>
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<tr>
<td><strong>Car Choice Revenue</strong></td>
<td>$0</td>
<td>$1,200</td>
<td>$0</td>
<td>$1,200</td>
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<tr>
<td><strong>Total Revenue</strong></td>
<td>$4,000</td>
<td>$5,200</td>
<td>$3,000</td>
<td>$4,200</td>
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<tr>
<td><strong>Set of Tires</strong></td>
<td>$0</td>
<td>$550</td>
<td>$0</td>
<td>$550</td>
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<tr>
<td><strong>Speeding Ticket</strong></td>
<td>$250</td>
<td>$250</td>
<td>$250</td>
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<tr>
<td><strong>Vehicle Repair</strong></td>
<td>$1,300</td>
<td>$1,300</td>
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<tr>
<td><strong>Depreciation</strong></td>
<td>$400</td>
<td>$0</td>
<td>$400</td>
<td>$0</td>
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<tr>
<td><strong>Fuel</strong></td>
<td>$166</td>
<td>$287</td>
<td>$166</td>
<td>$287</td>
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<tr>
<td><strong>Total Costs</strong></td>
<td>$2,116</td>
<td>$2,387</td>
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<tr>
<td><strong>Net Income @ 100%</strong></td>
<td>$1,884</td>
<td>$2,813</td>
<td>$884</td>
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<tr>
<td><strong>Net Binomial Income</strong></td>
<td>$1,292</td>
<td>$1,638</td>
<td>$792</td>
<td>$1,138</td>
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</table>
Education Example - Probabilities

Subaru & Visit Aunt

Frequency

Mustang & Visit Aunt

Frequency

Subaru & Business Meeting

Frequency

Expected: $2,435

Expected: $741

Mustang & Business Meeting

Frequency

Expected: $2,765

Expected: $1,093

$243 $347 $409 $580 $708 $826 $944 $1,063 $1,181 $1,299 $1,418 $1,536 $1,655 $1,773 $1,891 $2,010 $2,128

$353 $471 $589 $708 $826 $944 $1,063 $1,181 $1,299 $1,418 $1,536 $1,655 $1,773 $1,891 $2,010 $2,128

$59 $144 $258 $373 $487 $602 $717 $831 $946 $1,060 $1,175 $1,290 $1,404 $1,519 $1,633 $1,748

$682 $227 $681 $1,136 $1,590 $2,045 $2,499 $2,953 $3,408 $3,862 $4,317 $4,771 $5,226 $5,680 $6,135 $6,589 $7,043

$400 $518 $697 $884 $2,353 $2,812 $3,271 $3,730 $4,198 $4,656 $5,116 $5,576 $6,036 $6,496 $6,956 $7,416 $7,876

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Progress Energy
Best Choice?

- What is your risk appetite?
  - Risk averse?
    - You have insurance policies and you weigh the risks before making decisions (cannot afford losses)
  - Risk neutral?
    - Choose the option that provides you the best expected “average” outcome is the one you choose
  - Risk taker?
    - You tend to go after the big prize regardless of the risk involved
Education Example – Pin Hole Risk

Not buying $550 tires is a risk that you cannot afford!
How to Implement ERM?  
Keys to Success

- Start early with realistic goals
- Obtain *explicit* Senior Management support
  - Codify in a policy
  - Consequences for violations
- Link risk objectives to enterprise performance
  - Risk management vs. risk elimination
  - Earnings, credit & capital adequacy
- Pick your battles carefully - not too much at one time
- Share learning experiences
- Accept change