

GE Energy Financial Services

Renewable Energy Policy: Keeping Pace With Change

Kevin Walsh

ACORE Phase II
December 4, 2008

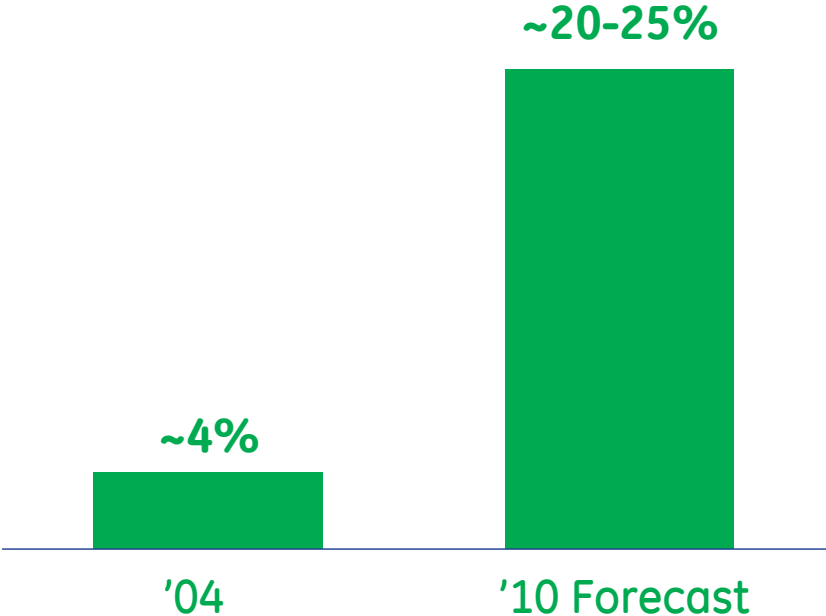


GE Energy Financial Services' strengths



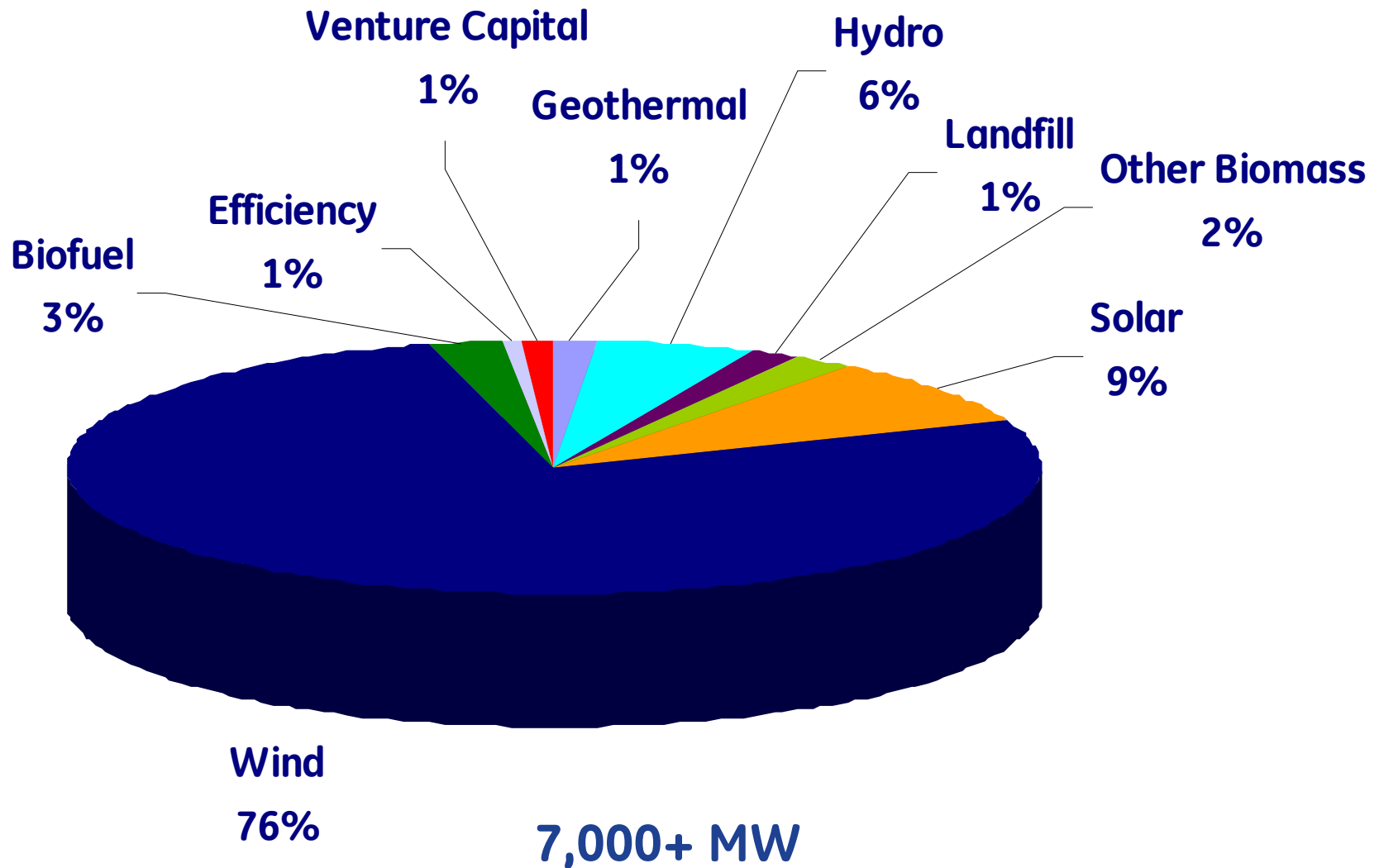
Accelerated renewable energy investing since 2004

Renewable assets % of EFS portfolio



\$4B+ invested since 2004
Goal... \$6B invested by 2010

Pursuing diversified technologies



Today: a tough environment

Write offs

More Pain ...



Liquidity/Solvency

Bankrupt



Government-brokered merger



Fed Regulated



Government Intervention

- ✓ \$700B bailout
- ✓ Short-selling ban
- ✓ Nationalization
- ✓ Commercial paper funding
- ✓ Gov't guarantees



Unprecedented market volatility

Tough environment for renewables, too

The New York Times

Pickens Delays His Wind Farm Plan

November 12, 2008



THE WALL STREET JOURNAL.
ONLINE

Winds Shift for Renewable Energy As Oil Price Sinks, Money Gets Tight

October 20, 2008



Clean Energy Investment Affected By Slow Market

October 22, 2008



THE WALL STREET JOURNAL.
ONLINE

Clean Energy Confronts Messy Reality

November 20, 2008



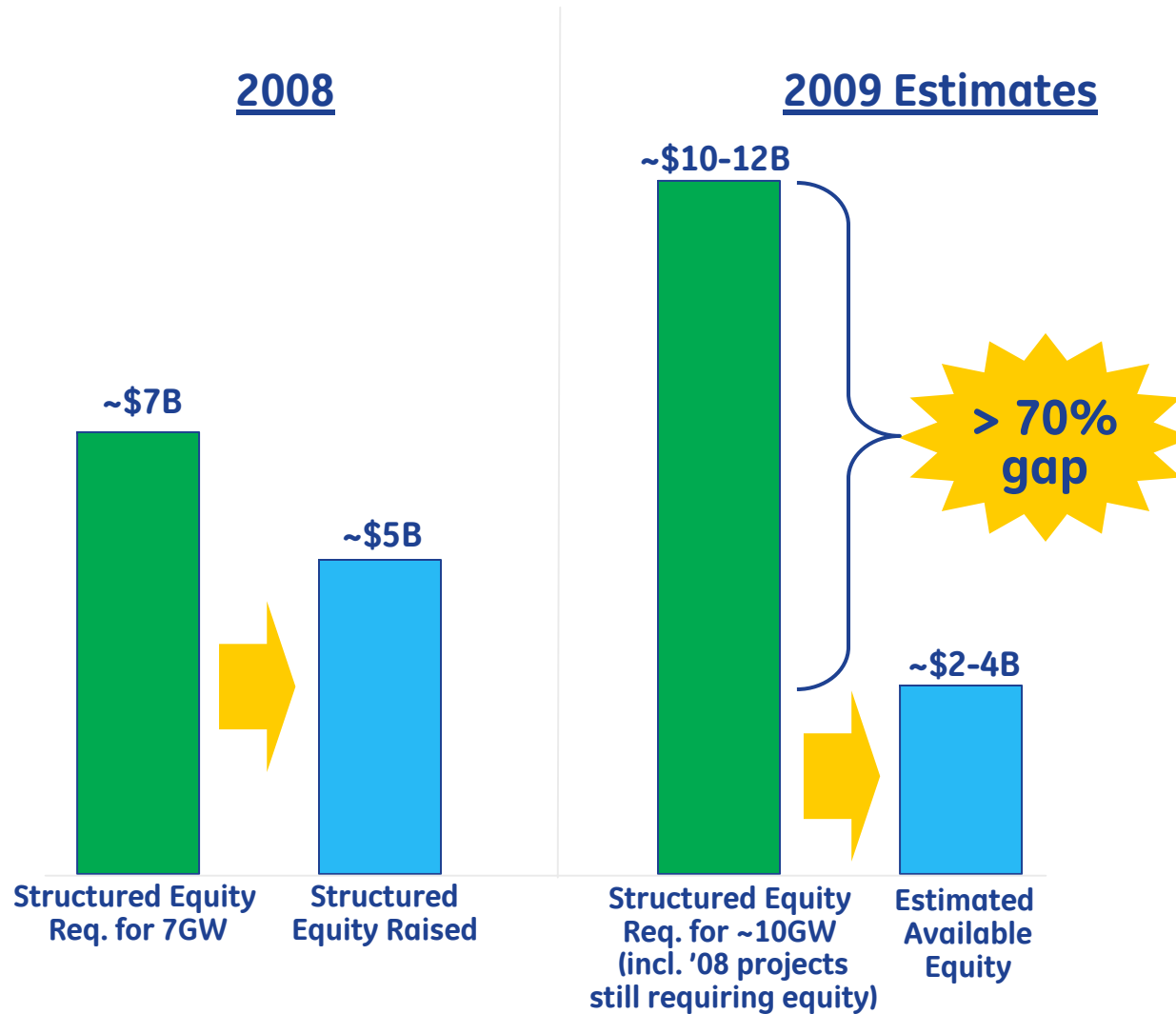
imagination at work

A domino effect

1. Worldwide financial crisis
2. Reduced tax capacity and capital for use by institutional investors
3. Tax credits become unusable
4. Equity for renewable energy projects dries up
5. Fewer renewable energy projects: potentially ~3,000 MW fewer wind farms installed in US in '09 vs. '08
6. Loss of ~38,000* “green collar” jobs and other economic, environmental benefits



Structured equity shortfall



How to jump start renewable energy investing

- ✓ Modify tax incentives to expand pool of potential investors in renewables
- ✓ Increase investment in constrained transmission infrastructure...create green energy superhighway



A solution: Turn tax credits into cash

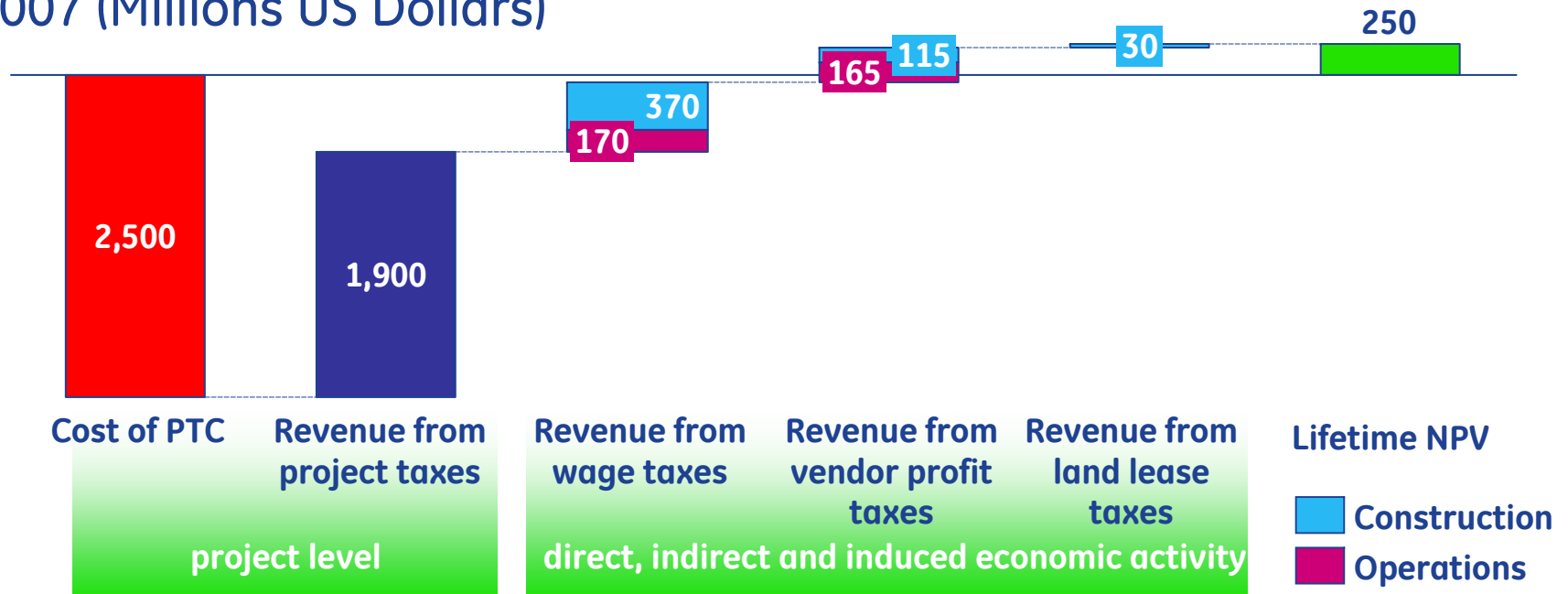
- Make PTC, ITC and MACRS refundable
 - ✓ Allows tax incentives to be used in new environment
 - ✓ Minimizes impact of liquidity crisis on renewable energy projects and creation of clean energy jobs



Preserves intent of PTC and ITC for new economic conditions at little/no additional cost

Then the incentives more than pay for themselves

NPV of estimated federal tax impacts from 5.2 GW of wind built in 2007 (Millions US Dollars)



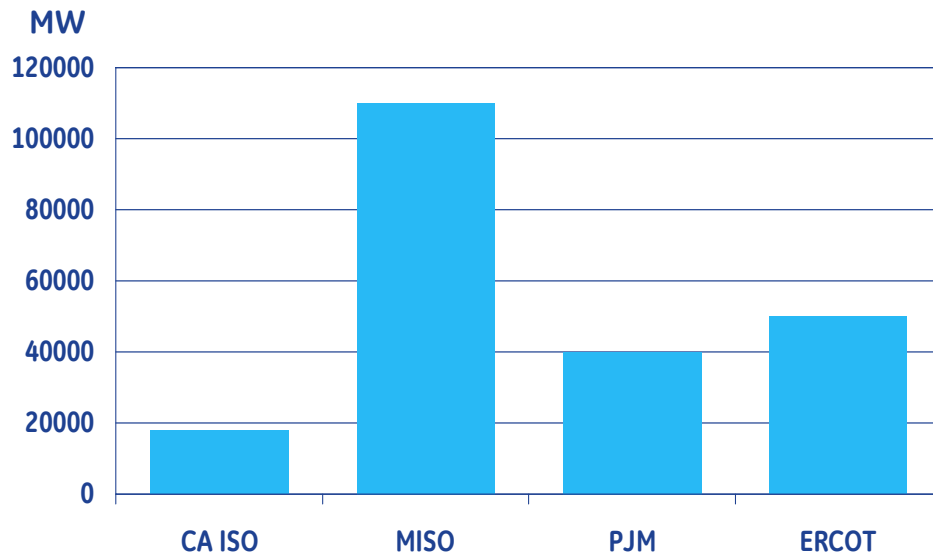
'08 benefits 60% greater; '09 benefits higher?



Notes:
 NPV calculation uses 4% discount rate based on 10-year US treasury note yield
 Tax on project income includes effect of 5-year MACRS depreciation
 Calculation does not include wind industry's economic effects on other energy sectors

Transmission: Another big challenge

Wind projects in interconnect queue

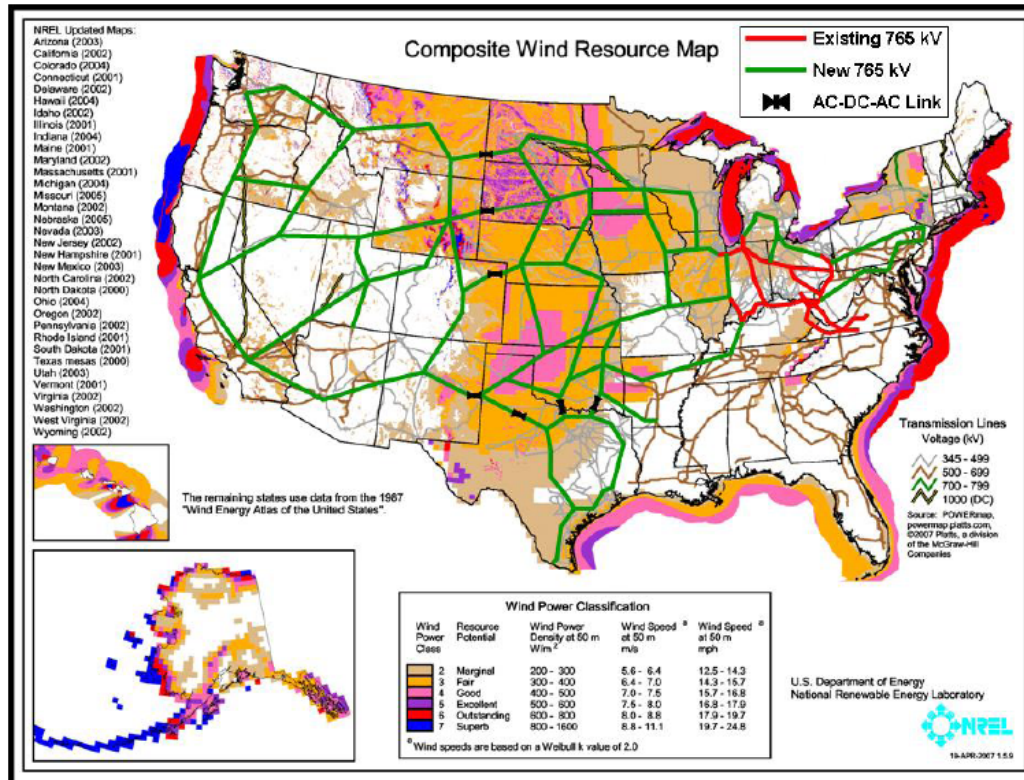


Source: AWEA

- **~300 GW of wind projects awaiting grid connection & new build**
 - Midwest queue bottlenecks
 - Texas curtailment
 - California lull in wind build out
- **Transmission broadly recognized as #1 long-term growth risk**
 - DOE 20% report: new transmission = largest barrier to 300 GW wind by 2030
 - AWEA 2008 conference poll: transmission as #1 issue for continued wind development
 - Need to move power from resource areas to load centers

Transmission policy solutions

AEP wind transmission superhighway ... 400 GW



Source: AEP, NREL, ERCOT

For wind to supply 20% of US power:

- ~\$60B in transmission expansion (\$20B NPV) ... 12,000 miles of new lines
- Federal interstate clean power "superhighway"
 - National Renewable Energy Zones (~TX)
 - Interconnect-wide planning & cost allocation
 - Federal backstop siting authority

National transmission superhighway to overcome regional barriers to planning, cost and siting

Policies to make “smart grid” mainstream

- Time-of-Use Pricing
 - Can reduce peak demand by >15%, total demand by >10%
 - Gives better price signals for load management, renewables and storage
- Reward Utilities for Driving Efficiency
 - “Decoupling” breaks the link between electricity sales and utility profits
- Accelerated Depreciation & Tax Incentives
 - 2008 Emergency Economic Stabilization Act provides increased incentives for utilities to install smart meters – but need to make sure incentives are usable

State and Federal actions needed

In sum

Current Situation

- Global financial crisis limiting tax capacity and capital for renewable energy investing
- Current tax incentives unusable
- Transmission constraints also limiting long-term development

Proposed actions

- Make tax credits refundable
- Need coordinated federal energy policy to ensure transmission build out
- Incentivize development of “smart grid”

For this capital-intensive industry,
the time to act is now



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