

U.S. Department Of Energy – Biomass 2012

Financing Strategies for Advanced Biorefineries

Project Insurance

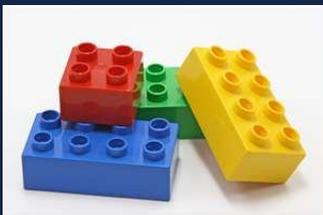
July 11, 2012



Willis

Typical Project Insurance Structure – Pre 2008

- **Builders Risk with Delay in Start-up (DSU)**
- **Construction Liability**
- **Workers Compensation**
 - OCIP or CCIP
- **Marine Cargo with DSU**
- **Professional Liability**
 - Contractor Provided or Project Specific
- **Contractor Performance Bonds**
- **Operational Property with Business Interruption (BI)**
- **Casualty Program**



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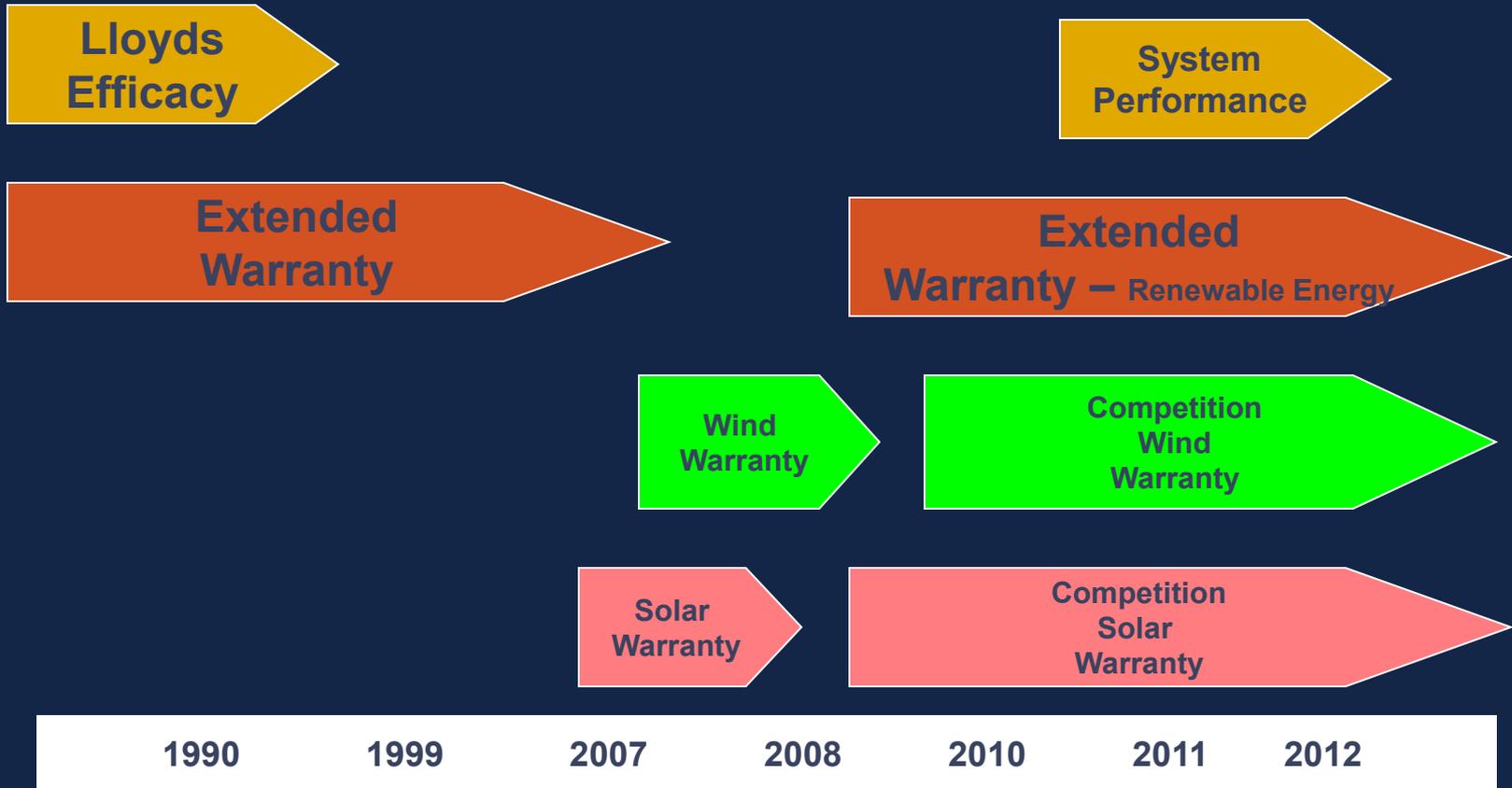
- Risk of performance covered by the OEM warranties
- For Fortuitous Events the DSU/BI wrapped the risk
- Efficacy risk basically carried by Lender and EPC Contractor
- Efficacy insurance disappeared in late 1990's

Lenders were willing to take risk and have skin in the game



Efficacy Risk

“The failure of an item to perform it’s intended function”



Is there a true efficacy cover available today?

- **OEM Warranties and associated insurance cover the component performance**
- **Cover cost of replacement but not the associated loss of revenue**
- **Original products only available to the OEM**
- **New products available to project owner and contractors**
- **Broader failure of design covered by Professional Liability**
- **New System Performance Insurance is close to a true efficacy product at this time**



System Performance Insurance

- Covers post construction operation of plants and processes
- Serial loss coverage
- Production output to design curve
- Availability
- If defects cannot be corrected a Liquidated Damage provision to buy down debt
- Five year term
- Limits - \$10 million to \$450 million
- 6 deals completed
- 25 in process



Liquidated Damages and Efficacy Insurance

- **New product aimed at Contractors**
- **Covers failure to deliver a project on time or failure to meet contractual performance requirements**
- **Aimed at projects with up to 24 month construction period**
- **Not for prototype unproven technology**
- **Limits available \$5 million**



Current Market for Performance Guarantee

- Limited capacity
- Long lead time to underwrite
- Engineering driven
- Large premiums – 15% to 25% Rate on Line
- As evidenced by Solar and Wind warranty markets new entrants will come in.....but this takes time

