



Evaluating Techno-Economic Viability: Kickoff remarks

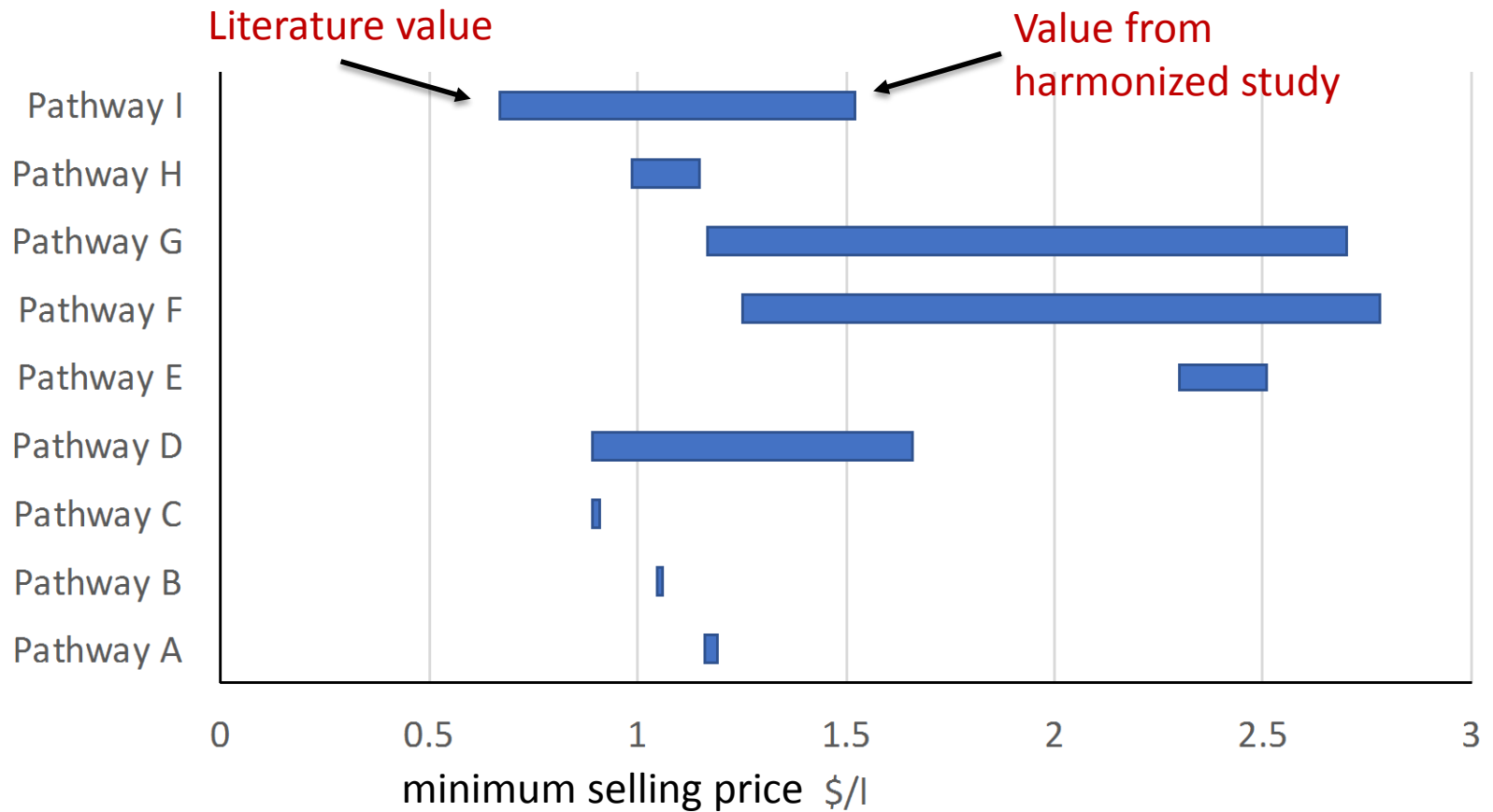
Robert Malina

CAAFI General Meeting
October 25, 2016

TEA Challenges

1. **Harmonization** of TEA assumptions across studies/pathways
2. Usage of **real-world** data to improve **accuracy** of results
3. Capturing **cost differences** between **pioneer** and **n-th plant** estimates
4. Appropriate inclusion of **policy environment**
5. Addressing **investor** and **societal** perspective

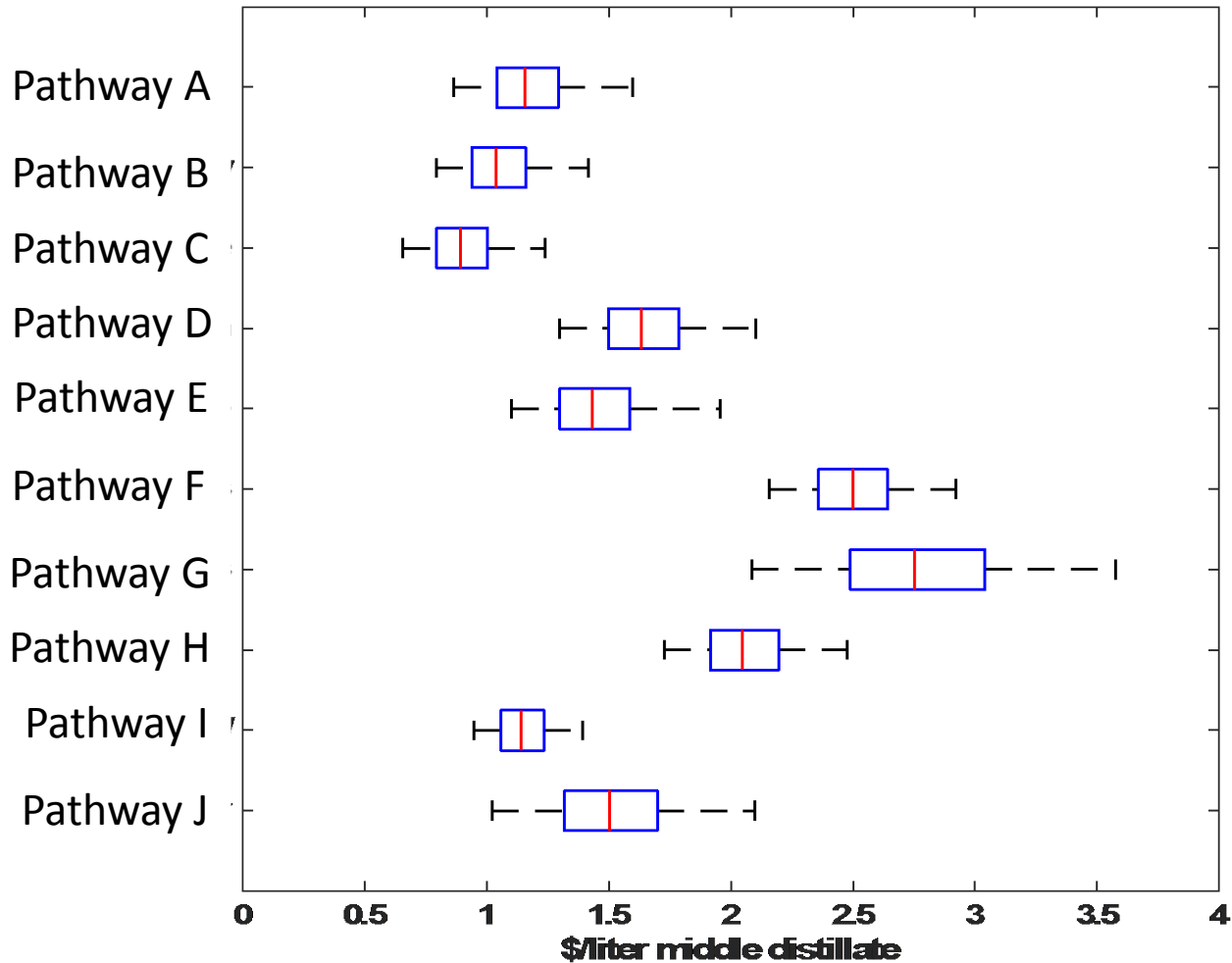
1. Harmonization of assumptions



Bounds of range are literature value for minimum selling price of fuel and mean value of cross-pathway study with harmonized assumptions

Pathway results anonymized

2. Inclusion of real-world data



Pathway results anonymized

2. Inclusion of real-world data ('ctd.)



Snapshot: Tracking of flights using alternative aviation fuels, October 24 2016, 1.31pm EDT
Data from ICAO Alternative Fuels Plane Finder

3. Capturing cost differences between pioneer and n-th plant cost estimates

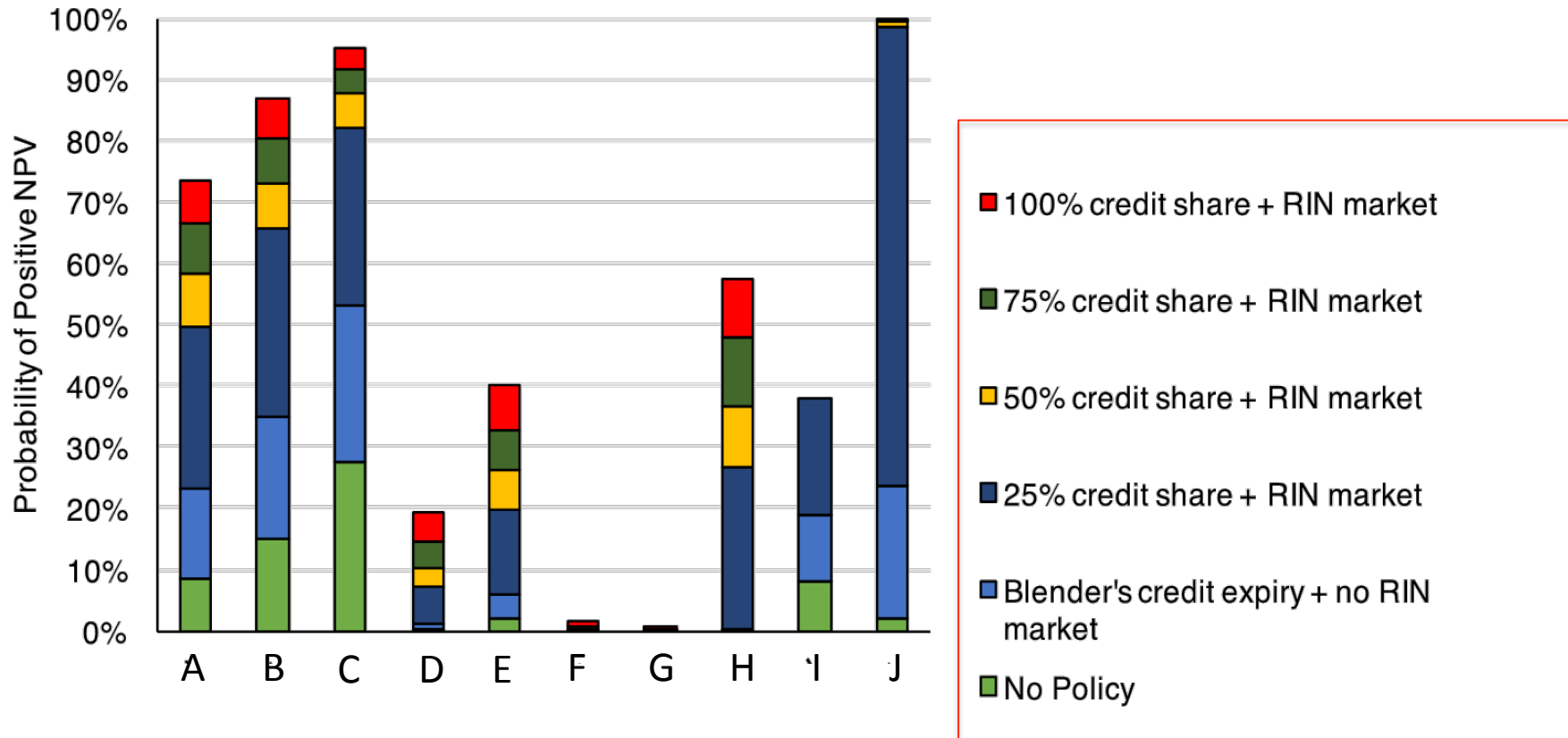
1981

**Understanding
Cost Growth and
Performance Shortfalls
in Pioneer Process Plants**

Edward W. Merrow, Kenneth E. Phillips
and Christopher W. Myers

Rand

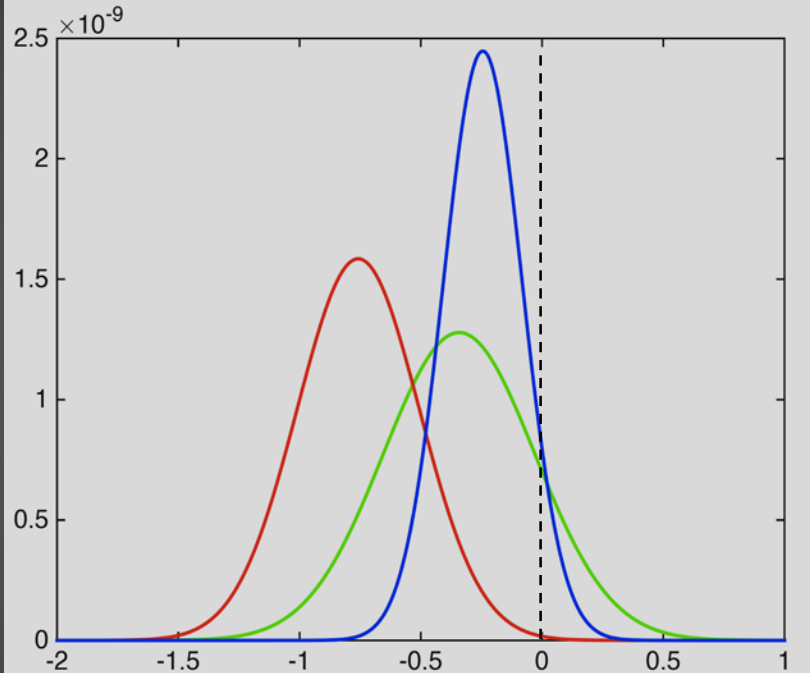
4. Appropriate inclusion of policy environment



Pathway results anonymized

5. Capturing differences between investor and societal perspective

Investor perspective:

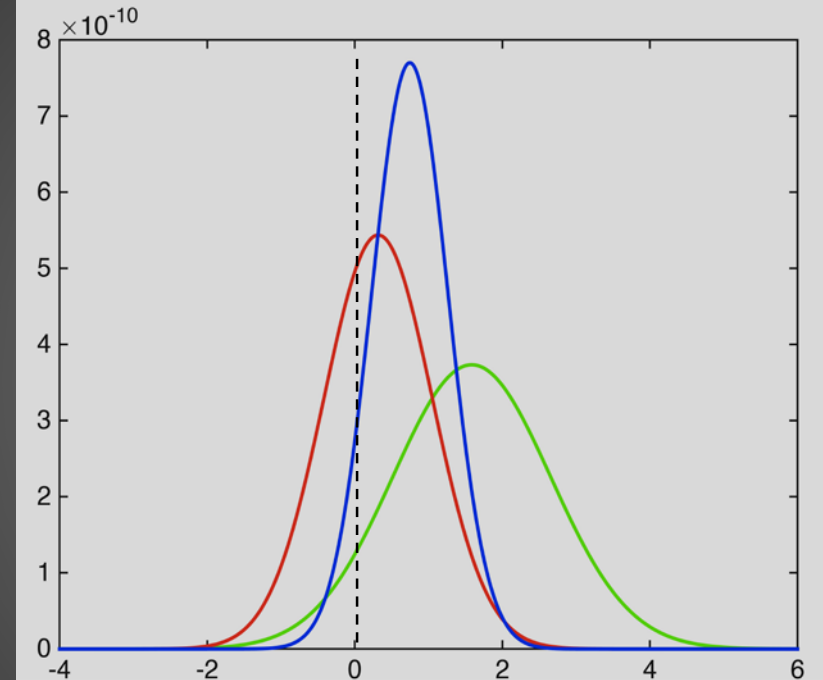


Net present value (\$B)

Probability of NPV>0:

14% 0.1% 7%

“Societal” perspective:



Net present value (\$B)

Probability of NPV>0:

93% 67% 93%

Pathway results anonymized



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