COST.

TF needs consistent baseline to compare numbers – some numbers we've seen are adjusted for inflation & some are not.

RISK.

TF needs ways to factor in **relative risk of options** as well as looking at expected cost.... at right is summary from a 2010 analogysis.

Source: PRACTICING RISK-AWARE ELECTRICITY REGULATION: What Every State Regulator Needs to Know, 2012. A Ceres Report by Ron Binz, Rich sedano, Denise Furey, Dan Mullen

Figure ES-2

RELATIVE COST RANKING OF NEW GENERATION RESOURCES

HIGHEST LEVELIZED COST OF ELECTRICITY (2010)

Solar Thermal

Solar-Distributed*

Large Solar PV*

Coal IGCC-CCS

Solar Thermal w/incentives

Coal IGCC

Nuclear*

Coal IGCC-CCS w/incentives

Coal IGCC w/incentives

Large Solar PV w/incentives*

Pulverized Coal

Nuclear w/ incentives*

Biomass

Geothermal

Biomass w/ incentives

Natural Gas CC-CCS

Geothermal w/ incentives

Onshore Wind*

Natural Gas CC

Onshore Wind w/incentives*

Biomass Co-firing

Efficiency

LOWEST LEVELIZED COST OF ELECTRICITY (2010)

Figure ES-3

RELATIVE RISK RANKING OF New Generation resources

HIGHEST COMPOSITE RISK

Nuclear Pulverized Coal

Coal IGCC-CCS

Nuclear w/ incentives

Coal IGCC

Coal IGCC-CCS w/ incentives

Natural Gas CC-CCS

Biomass

Coal IGCC w/ incentives

Natural Gas CC

Biomass w/ incentives

Geothermal

Biomass Co-firing

Geothermal w/incentives

Solar Thermal

Solar Thermal w/incentives

Large Solar PV

Large Solar PV w/ incentives

Onshore Wind

Solar—Distributed

Onshore Wind w/ incentives

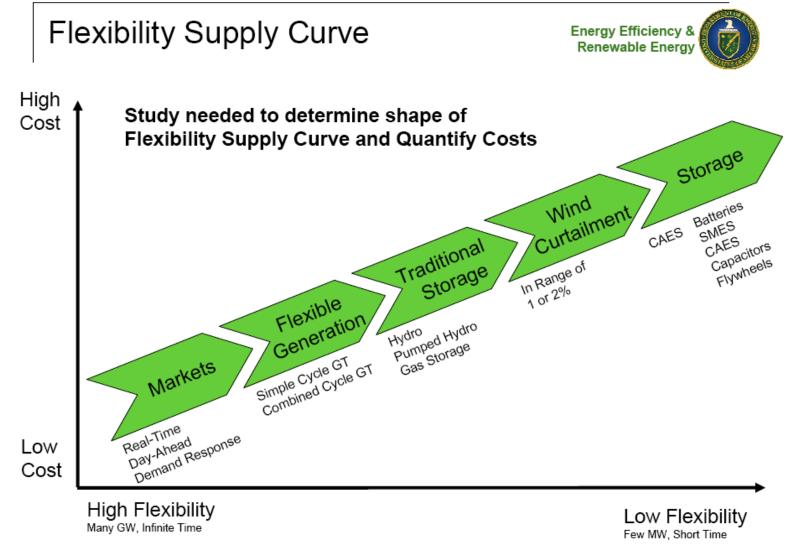
Efficiency

LOWEST COMPOSITE RISK

* Cost ranking based on 2010 data. Does not reflect recent cost increases for nuclear or cost decreases for solar PV and wind.

STORAGE

tends to be expensive & targeted, valuable in right spots. Cheapest solution: Market rules for existing flexible resources.



Source: U.S. Dept of Energy. Wind Dispatchability and Storage Interconnected Grid Perspective Bradley M Nickell, PE Technology Manager – Wind Systems Integration (brad.nickell@ee.doe.gov)