EGU-CCS; risk comparison

• Electrical utilities are sophisticated in the identification, acceptance, and management of risk. We are both “risk-curious” and “risk-analytic”. Long-term risk presents more uncertainty.

• Utilities are accountable to a wide range of stakeholders such as the PSC, shareholders, customers, and the general public. Utilities have significant exposure and reporting requirements related to investments decisions.

• Many uncertainties related to EGU-CCS, while not the same as “business as usual” activities can be compared; therefore more experience with CCS will make industry more comfortable with it.

  - \( \text{CO}_2 \) capture can be compared to environmental controls such as FGD, SCR, bag-houses

  - \( \text{CO}_2 \) transportation can be compared to e-transmission & distribution as well as natural gas pipelines

  - \( \text{CO}_2 \) storage can be compared to wastewater injection

  - Long-term liability of stored \( \text{CO}_2 \) can be compared to storage of nuclear fuel rods, ash & gypsum, and hydroelectric plants
EGU-CCS; other important risks

- The costs associated with EGU-CCS represent a greater obstacle to commercial deployment than the environmental risks. *CCS is hampered by the level of regulation with associated cost uncertainty which misalign CO₂ with the level of protection of air toxins.*

- There is uncertainty related to future operational flexibility in bypass. Is the tail wagging the dog with geologic sequestration? *CCS is hampered by concerns with the requirement to reliably produce power.*

- Risk associated with off-site storage will require new business models. *CCS is hampered by vertical integration with contractual relationships and complexity of partners with environmental and permit compliance implications.*

- Risk always exists with immature regulatory and permitting frameworks. *Uncertainty exits with the integration of project development, operations, and finance.*
E. Downs Green, Gulfport Mississippi quoted in the Sun Herald Newspaper

“What if the pumping of all this exhaust gas deep underground causes a huge explosion, releasing a noxious toxic cloud of coal gas that gets ignited above ground, barbecuing the surrounding area?”

Risks associated with false risk perception still exist.