**Context and Background:**

Nicholas W. Owens, a partner at NorthBridge Group, provides testimony supporting Entergy Louisiana LLC’s (ELL) application, focusing specifically on the rationale for adding gas-fired generation to ELL's resource mix, and addressing customer commitments related to clean energy funding.

**Key Points and Sections:**

**I. Introduction:**

* Owens explains his role and expertise in economic and strategic consulting, emphasizing electricity market economics, generation and transmission planning, and regulatory strategy.

**II. Additional Gas-Fired Generation:**

* **Customer Load Addition**: The customer project involves substantial new load requiring firm, round-the-clock electricity. The customer will operate at a high load factor, necessitating reliable, continuous energy generation.
* **Renewables and Storage Limitations**:
  + Currently available renewables (primarily solar) cannot reliably deliver continuous, firm power. Intermittency of solar generation makes it impractical as a standalone solution for continuous load.
  + Even when combined with storage, the required scale, infrastructure, and costs are significantly prohibitive, with battery storage costs making it economically unviable at the scale needed.
* **Justification for Gas-Fired Generation**:
  + Owens argues gas-fired Combined Cycle Combustion Turbine (CCCT) technology is the most suitable and practical solution given the customer's reliability needs and load characteristics.
  + CCCTs provide continuous power, efficient operation, and flexibility compared to simpler combustion turbines or renewable alternatives.
  + Without adding gas-fired generation, the customer would likely relocate its facility elsewhere, negatively impacting local economic development.
  + Gas-fired generation is supported by current industry practices and market trends across the U.S. where integrated utilities and power providers are investing in similar facilities.

**III. Customer Clean Energy Funding Commitments:**

* The customer has committed significant clean energy investments, specifically:
  + Funding for 1,500 MW of new solar or hybrid renewable capacity.
  + Funding for a Carbon Capture and Storage (CCS) retrofit (~900 MW) on existing CCCT units at Lake Charles Power Station.
* Together, these two commitments would result in around 60% of the energy production from new CCCT units proposed by ELL to be zero- or low-carbon.
* CCS technology is crucial as it allows significant reductions in CO₂ emissions, essential for decarbonization, and demonstrates commercial viability at a meaningful scale.
* Owens emphasizes that demonstrating CCS at scale is critical for broader industrial decarbonization. The customer's commitment significantly advances Louisiana’s clean energy capabilities and positions the state as a leader in deploying advanced clean energy technologies.

**Conclusion:**

Owens concludes that ELL's proposal, including gas-fired generation with substantial customer-backed clean energy funding, is a practical, economic, and environmentally responsible solution to meet the customer's significant and continuous electricity demands.