United States Nuclear Regulatory Commission Official Hearing Exhibit
In the Matter of: NUCLEAR INNOVATION NORTH AMERICA LLC (South Texas Project Units 3 and 4)
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STP 3&4: NRG Participation Status Update

April 19, 2011

Safe Harbor

This presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are subject to certain risks, uncertainties and assumptions that include, but are not limited to NINA and the STP 3&4 nuclear development project, and typically can be identified by the use of words such as "will," "expect," "estimate," "anticipate," "forecast," "plan," "believe" and similar terms. Although NRG believes that its expectations are reasonable, it can give no assurance that these expectations will prove to have been correct, and actual results may vary materially. Factors that could cause actual results to differ materially from those contemplated above include, among others, general economic conditions, hazards customary in the power industry, weather conditions, competition in wholesale power markets, the volatility of energy and fuel prices, failure of customers to perform under contracts, changes in the wholesale power markets, changes in government regulation of markets and of environmental emissions, the condition of capital markets generally, our ability to access capital markets, adverse results in future litigation, the receipt of Federal loan guarantees, and successful partnering relationships.

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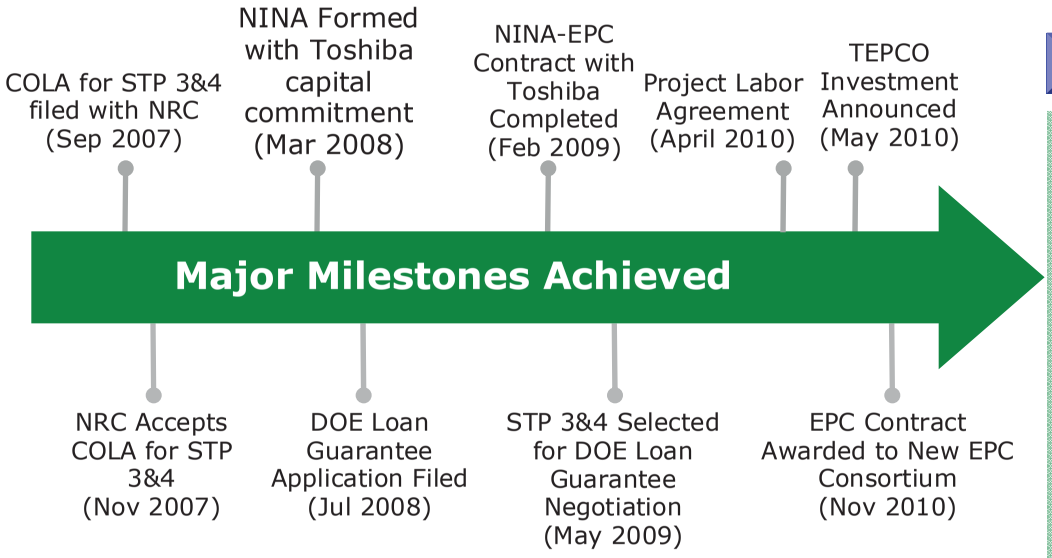
Agenda

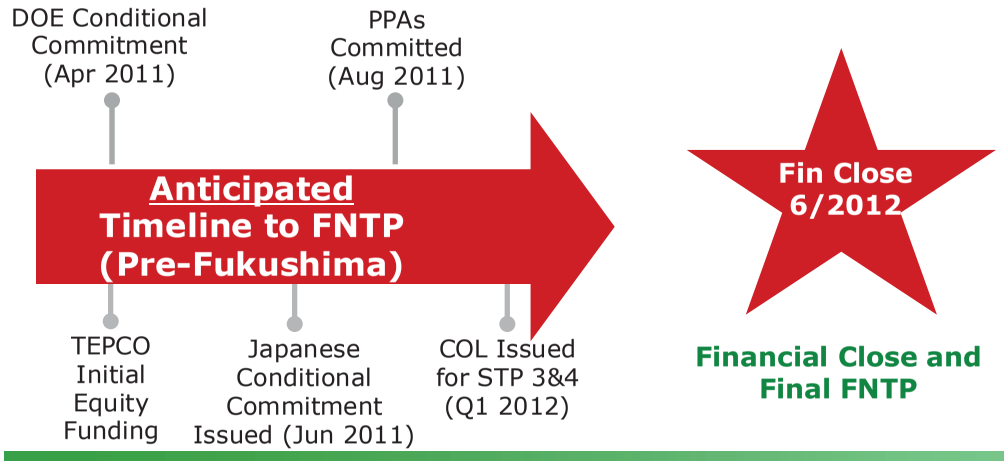
- Background
- STP 3&4 Development Pre- and Post-Fukushima
- STP Action Plan
- Financial Implications
- Future of STP 3&4
- NRG Going Forward
- Appendix

STP 3&4 Development



Project Momentum at Time of Fukushima

- ✓DOE Term Sheet negotiated and in active credit review process
- ✓Japanese financing due diligence in full swing
- ✓Draft Safety Evaluation Report issued by NRC
- ✓Environmental Impact Statement submitted for EPA review
- ✓EPC Consortium closing on fixed price target
- ✓Over 50% Complete Engineering
- ✓Active dialogue with PPA counterparties begun



...As A Result of Fukushima

- NRC Safety Review could lead to modified design requirements
- ⬇
- EPC Consortium cannot finalize pricing without final design
- ⬇
- PPA discussions are pointless without firm price EPC
- +
- Japanese financial participation in project now significantly in doubt at a time when attracting new equity investors is difficult

Prior to the events in Japan, STP 3&4 had developed significant momentum, particularly around receipt of the COL and DOE Conditional Commitment

STP Action Plan

Strategy

- NRG does NOT have unilateral right to cancel the project outright, just the right to terminate our own participation, financial and otherwise
- NINA and Toshiba (through TANE subsidiary) have agreed to minimize NINA spend to the maximum extent possible while NRC review is in process
- NINA wind-down plan under development if NRC or DOE response is negative, or if project success otherwise becomes impossible

Actions

- Reduction of NINA to skeleton staff to support licensing, financing, and wind-down analysis
- Elimination of 3rd party engineering work and all long lead materials (LLM) procurement
- Preserved capability for NRC license response until at least first phase of Fukushima safety review is complete

The assets and liabilities of STP 3&4 are owned by NINA, not NRG

Financial Implications of NRG Plan

Cash and Accounting Adjustments

($ in mm)		
Total NRG Cash Funding of NINA Investment	$	331
Toshiba Cash Funding of NINA, net of other NINA assets	$	150
Estimated Pre-Tax GAAP write-down of NINA Net Investment in 1Q11	**$**	**481**
Estimated Maximum Cash Funding of NINA Wind-down expenses – to be expensed upon future funding in 2011	$	20

NOTE: The reduction in scope for the STP 3&4 project triggered an impairment review under GAAP rules resulting in the write-down of the entire net book value of the project. Even though NRG retains its legal ownership % and NINA continues to pursue the NRC license and DOE guarantee, the reduced probability of construction at STP resulted in expensing all capital expenditures retroactively along with prospective expenditures.

Financial Implications

- **EBITDA** –NRG will exclude from Adjusted EBITDA since Japanese Earthquake/Fukuskima triggered events leading to write down
- **FCF, Before Growth Investments** – NRG 2011 funding of NINA cash wind down expenses will reduce FCF by $20 MM
- **Tax Impact** – Write-down costs will increase net tax loss carry forward, thereby reducing future cash tax payments
- **Credit** – Write-down will not have adverse impact on restricted payment basket or financial covenant implications

NRG will remove all NINA related assets and liabilities from its books effective 3/31/11 and expense the $20mm remaining cash funding for NINA

Why Continue with the Licensing and Engineering Process?

The Country, the State, and the Global Environment need projects like STP 3&4…

- ❑ The US needs to replace its aged base load coal and nuclear fleet soon (see Appendix)
- ❑ New nuclear is the lowest cost, most reliable, large scale form of zero emission, zero greenhouse gas power generation available
- ❑ Over time, global nuclear safety is likely to deteriorate if the U.S. Nuclear Regulatory Commission is not in a position to provide continued global leadership in the construction and operation of new nuclear plants
- ❑ Texas, once again, is experiencing robust baseload demand growth and would benefit from greater fuel diversification

What confluence of events could galvanize public and private action to save STP 3&4?

- ✓ A sustained sharp rise in natural gas prices in the forward market
- ✓ A bipartisan consensus around a national energy policy built around (i) an aggressive, long term Clean Energy Standard, and (ii) a national commitment to electric and CNG-powered vehicles
- ✓ A renewed focus on substantial job creation through private sector investment in major infrastructure projects

Why not just start over later?

- ❑ License and loan are, and always will be, essential to successful development of STP 3&4
- ❑ Restarting licensing process would require starting over the five-year process
- ❑ DOE loan guarantee may never be available again

Preserving Expansion Option at STP is simply Good Asset Management

What Would it Take for STP 3&4 to get Back on Track?

Critical Path Items Before Fukushima

1.	**NRC**	At end of initial safety review, NRC essentially would have to give STP 3&4 "clean bill of health" ending current regulatory uncertainty
2.	**DOE**	Conditional Loan Guarantee
3.	**EPC**	Toshiba and Shaw confirm acceptable pricing
4.	**Off-take**	Long-term firm price off-take agreed for at least one-third of plant output

Critical Path Items as a Result of Fukushima

5.	**Debt Gap**	Japanese export financing
6.	**Equity Gap**	Equity investment to fill equity and development funding gap left by NRG and, potentially, TEPCO

Not impossible, but improbable in present climate

Future Strategy – What to Expect from NRG

On Nuclear

- NRG remains a proud owner of STP 1&2 and a firm believer in the need for nuclear power to underpin America's future clean energy economy
- NRG would like to see STP 3&4 completed and will use its (**non-financial**) resources to support our existing partners, and any potential new partners, to drive the project forward to successful completion
- NRG's management, and Board of Directors have agreed NRG will make NO further expenditures of NRG financial resources in pursuit of STP 3&4

For NRG Future Growth Strategy

- ✓ Capital Allocation, in terms of return of capital to stakeholders, to be pursued with renewed vigor
- ✓ Strengthen Core Fleet with more opportunities for Repowering NRG
- ✓ Renewables momentum with increasing bullishness on solar as we begin migration of business from utility scale focus to distributed focus
- ✓ Sustainable Energy Solutions delivered through Reliant and Green Mountain, eVgo and other channels

NRG has multiple high value enhancing growth avenues in respect of which it will be applying its management and capital resources

Appendix

South Texas 1&2 Project Overview

Key Operating Data for Current Units		
Unit	1	2
Commenced Operations	8/1988	6/1989
License Expiration	2027	2028
Nameplate Capacity (MW)	1,350	1,350
Technology	Westinghouse PWR	
Capacity Factor (3-yr. avg., 2006-08)	99.5%	98.2%

Key Site Characteristics

- Four unit site (2 currently operating)
- 7,000 acre reservoir
- 12,200 acre site
- Low population
- Minimal site preparation required
- Barge, rail & road access
- Transmission connections to Houston, San Antonio and Austin

Other STP Facts

- Owners include NRG (44%), City of San Antonio (40%) and City of Austin (16%)
- STPNOC is a leading national nuclear operator with over 14 years of experience
- Highest producing two-unit nuclear plant (out of 33), seven years in a row
- Only U.S. facility designed with three independent safety trains per unit
- Named to the 2010 list of America's Safest Companies -- first nuclear facility to receive this award
- Used fuel at STP is stored in pools with redundant cooling methods and backup procedures in the event that all the cooling systems fail to ensure that the used fuel is safely stored.

Existing STP Facility is Young and Robust

New Nuclear is Imperative to Energy Security in the U.S.

Energy Independence[1]

- Avoids 37.6 million barrels of oil/p.a.
- Avoids 177 bcf of gas/p.a.
- Avoids 13.1 million tons of coal/p.a.
- Avoids 8,100 MW or 202,500 acres of land for wind

Environmental Air Emission Displaced[1]

- Avoids SO2 emissions of 36,069 tons/p.a. (3.050 lb/MWh)
- Avoids NOx emissions of 10,371 tons/p.a. (0.877 lb/MWh)
- Avoids mercury emissions of 828 lbs (0.56 oz/GWh)
- Avoids CO2 emissions of 17.479 million tons (1,478 lb/MWh)

[1] Assumes 100% capacity factor for STP 3&4 at 2700 MW, ERCOT average emission rates (2007, except for Mercury (2005 average)) and assumes representative technology by fuel type

Before and after Fukushima, nuclear power is and remains the most efficient, most reliable and least expensive "zero emission" power generation option available

STP – Overview on Safety After Fukushima Events

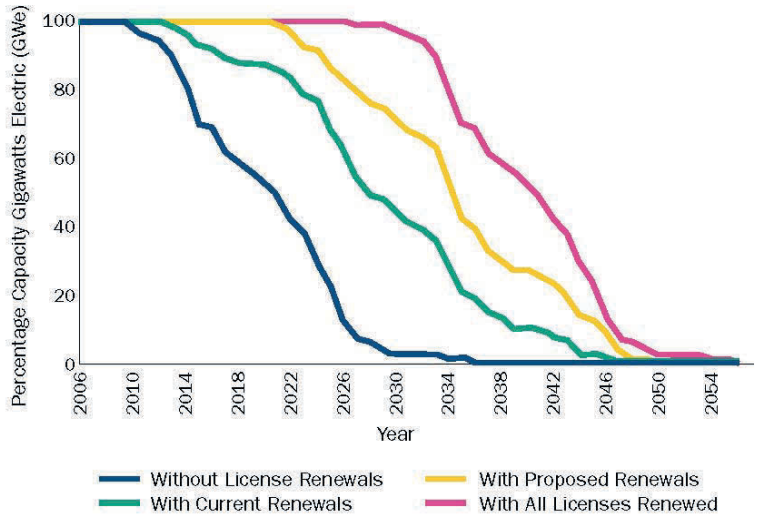
- ✓ STP is located in one of the lowest seismically-prone regions in North America per the US Geological Survey. (Late last year, the NRC excluded STP from a list of U.S. plants that require continued review of seismic studies for their geographic regions)
- ✓ Seismic records date back to 1699 for the region. No earthquakes have occurred within 80 miles of the site.
- ✓ The closest fault is 85 miles from STP, enough distance to eliminate the possibility of differential surface movement at the site due to displacement on these faults.
- ✓ STP was designed and constructed with robust and redundant safety systems to meet stringent Nuclear Regulatory Commission regulations. These regulations require that STP be fortified to withstand strong earthquakes and to assure complete safety even though southeast Texas is one of the least seismically active areas in North America.
- ✓ STP is located 11 miles inland at an elevation above the maximum flooding from either a major hurricane or the largest possible tsunami in the Gulf of Mexico
- ✓ Safety equipment at STP is protected from major flooding at the site up to elevations as high as 20 feet above grade
- ✓ Safety equipment at STP is protected from winds in excess of 300 mph
- ✓ Used fuel at STP is stored in pools with redundant cooling methods and backup procedures in the event that all the cooling systems fail to ensure that the used fuel is safely stored.

STP site safety sound and strong; events such as Fukushima highly improbable

Why, Notwithstanding Fukushima, the US needs New Nuclear Reactors Now

License Expiration of Existing Units

Figure 10. **Projected Electric Capacity Dependent on License Renewals**



Source: U.S. Nuclear Regulatory Commission

Required New Units Just to Stay Even with Retirements

	2010s	2020s	2030s	2040s	2050s	Total
License Expirations	0	1	50	47	6	104
Retired MWs	0	498	41,910	51,219	6,254	99,881
GWHrs of Generation (a)	0	3,926	330,418	403,811	49,307	787,462
Carbon Savings (Tons) (b)	0	1,963	165,209	201,905	24,653	393,731
New Plants Required (c)	0	0	32	39	5	76
Total Market Potential	$0.0	$1.9	$161.2	$197.0	$24.1	$384.2

(a) Assuming 90% Capacity Factor
(b) Assuming 0.5 tonnes per MWHr
(c) at 1,300 MWs per Unit

If the industry solely replaces retiring units over climate change recovery period (now-2050), we need 3-4 new nuclear reactors on line per year for 2020-2050

If the U.S. wishes to double zero carbon nuclear contribution to national electricity supply by 2050 in order to meet GHG reduction objectives, the total market (150 units) would be $800 billion

If a fully electrified light duty transportation system is in place by 2050 supplied by new nuclear plants (15% increase in demand), we need to add about six new reactors per year across the entire period

The demise of new nuclear, along with the continued impossibility of new coal development, endangers the single greatest strength of the American electric system: fuel diversification