

# Wall Street attitudes toward Small Modular Reactors (SMRs)

## Briefing for US Department of Energy

Presented by Bruce Lacy  
April 12, 2013

# Wall Street: Who We Talk to and What They Do

Users of Capital ( <u>D</u> ebt & <u>E</u> quity)	Markets and Intermediaries	Providers of Capital
Publicly traded companies (D&E)  Privately held companies (D&E)  COOPS (D)  Munis and Public Power (D)	<u>Public Capital Markets</u> <b>“Investment” Bankers</b> Publicly traded: -Debt- Bonds -Equity- Stocks  <b>Rating Agencies</b> <b>Analysts</b>  <u>Bank Markets</u> <b>“Commercial” Bankers</b> -Loans -Project Finance -Credit Facilities  <u>Private Capital Markets</u> <b>Private Equity</b> <b>Hedge Funds</b>	<b>Pension Funds</b>  <b>Mutual Funds</b>  <b>Insurance Companies</b>  Companies (public and private)  Individual Savers

# About the Survey

- 2013 is the 7<sup>th</sup> regular survey
- Survey started in 2007 focused on nuclear new build
- Has expanded over time to include coal, natural gas and renewables
- Typically 40-45 participants (47 in 2013)
- “In-person” interviews provide opportunity for relationship building and in-depth understanding of attitudes
- Wall Street is not monolithic

A joint effort between Lacy Consulting Group, LLC  
and Chappaqua Capital Consultants, LLC

# DOE's Request for Survey

- Incorporate SMRS into existing survey
  - Including specific survey question(s)
  - Pursuing SMRs as a topic in other questions
- Analyze results in context of current and prior year survey results
- Provide a tailored briefing on Wall Street attitudes toward SMRs

“What should DOE's Wall Street strategy be for SMRs?”

# Summary

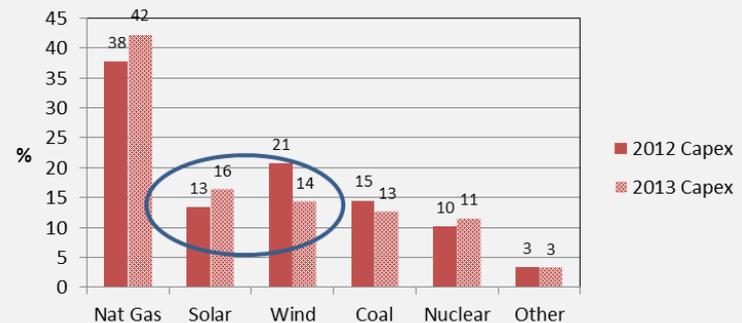
- Poor demand and cheap natural gas are the overwhelming issues driving thinking about new generation
- Nuclear is a subset of this demand/natural gas picture
- Wall Street's attitude toward nuclear:
  - Generally favorable
  - But mixed with many issues
- Wall Street generally sees SMRs as something potentially very different from the “big” reactor experience
- SMRs are largely a “blank slate” for Wall Street
- This is an opportunity for DOE to establish the SMR message

# Near Term View, 2012-2013

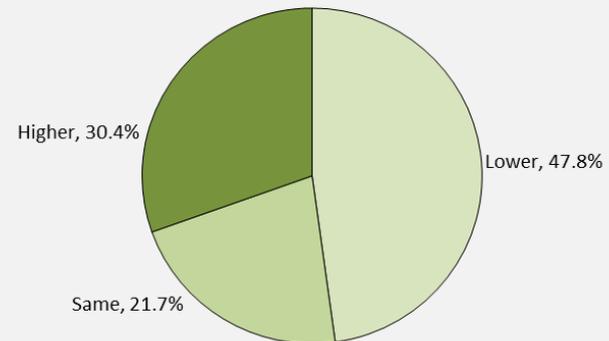
Natural gas dominates all discussions

- Renewables surpass coal and nuclear
- Solar is expected to surpass wind
- Coal spending is driven by environmental concerns
- Nuclear spending is lowest of all generation options surveyed
- 2013 forecast for generation Capex compared to 2012 is predominately the same or lower

**2013 Estimated allocation, by %, of investment in US generation**



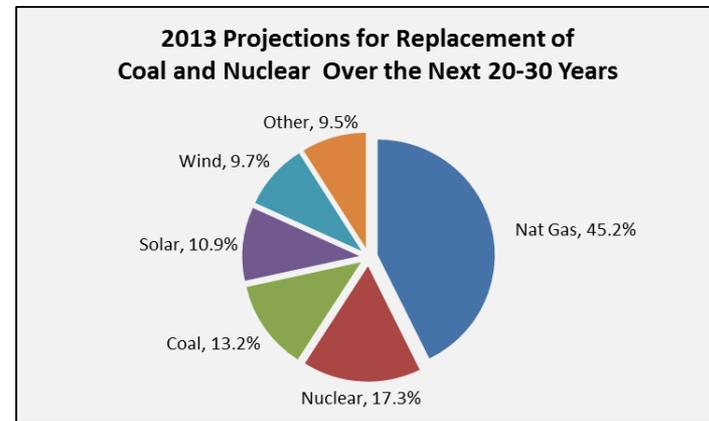
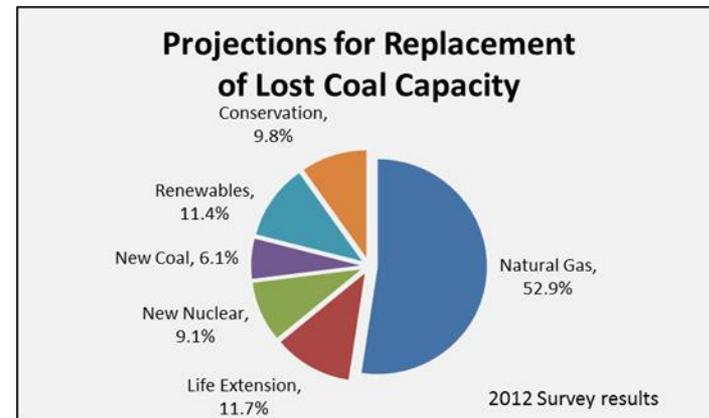
**2013 Expectations for 2013 vs. 2012 generation investment**



# Long Term View

## Natural gas dominates

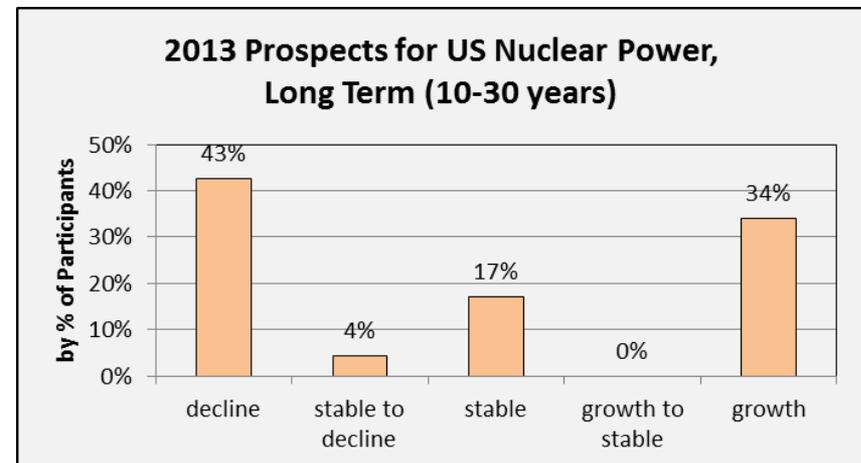
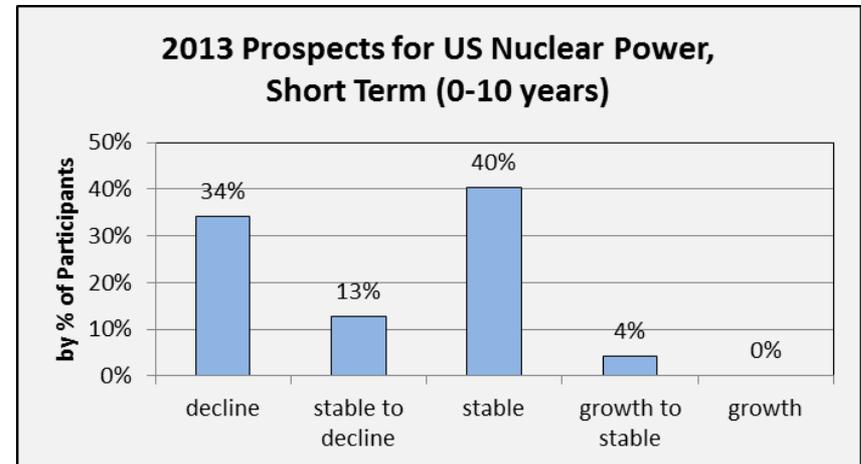
- 2013 Survey long term look shows Natural Gas down slightly from 2012 survey, but change is probably not significant due to shift in question
- Renewables are seen as replacing coal and nuclear “baseload”
- Coal and nuclear are forecast to be replaced by 25-30% coal and nuclear



Note: the 2013 vs. 2012 comparison above is based on two different, but similar questions

# The Future of “Big” Nuclear

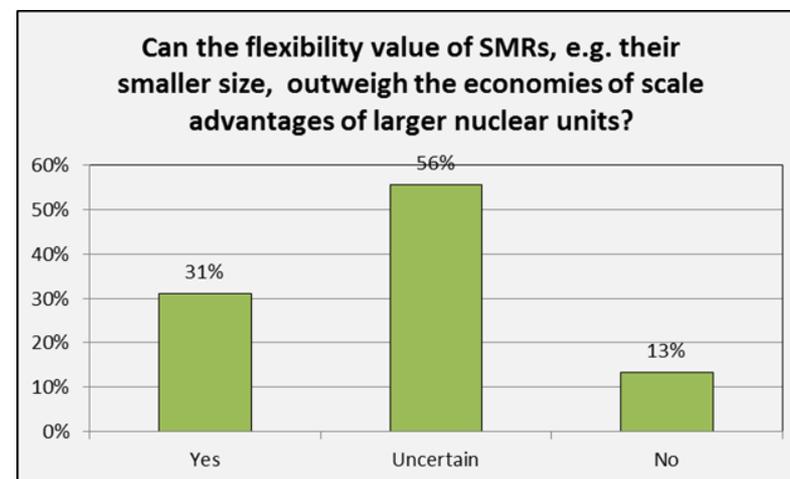
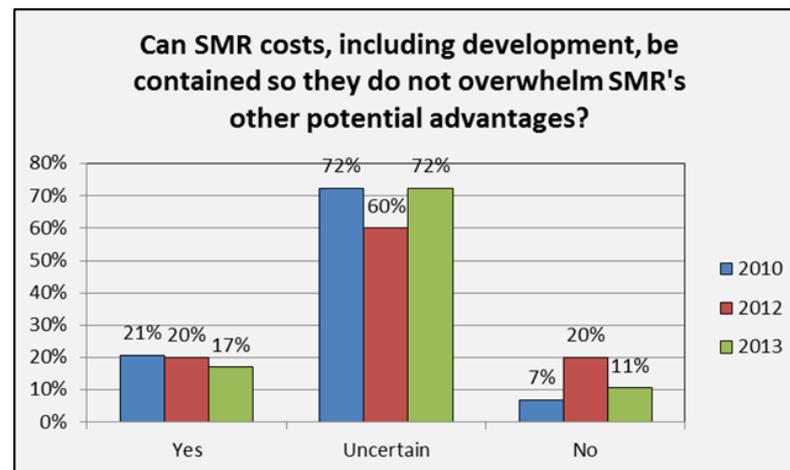
- Short term (0-10 years) perspective is stable (Vogtle and Summer are key) or decline
- Longer term (10-30 years) perspective is binary, either growth or decline
- Nuclear issues are competitiveness and ability to construct, not Fukushima
- SMRs are rarely mentioned as part of long term picture, regarded as new and different



# Can SMRs be Competitive?

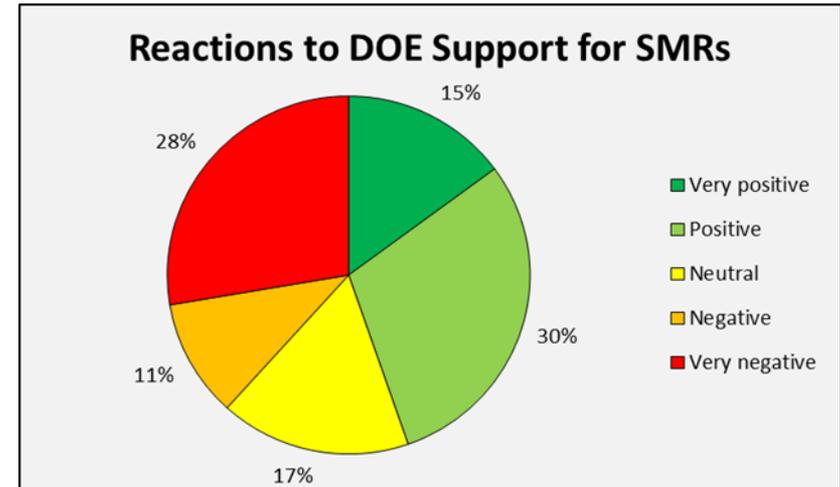
Uncertainty dominates responses

- Anxiety/skepticism about SMRs and “big” reactor overheads
- Skepticism about whether SMRs are “real”
- Smaller financing need of SMRs is very important
- CCCT’s and Renewables are noted as SMR competitors
- There are SMR advocates on Wall Street



# “What additional confidence does the recent Government investment in SMRs (award to Generation mPower for development) give you in terms of improving future deployment potential for SMRs?”

- Positive reactions include:
  - R&D is role of government
  - Government is paying attention
  - Planning for the future
  - Increases likelihood of a licensable design
- Neutral reactions include:
  - Helpful for DOE to jumpstart, but need to survive on their own
  - Fear lack of support from others
- Negative reactions are a mix of predictable with surprises:
  - Government does not have commercial perspective
  - SMR program is not big enough
  - Need framework of a broader policy



# Additional themes and "comments" relevant to SMRs

- Carbon is off the radar screen (for the moment)
- "Need to approach SMRs with upfront view toward international market"
- "Need to get big high tech manufacturers involved"
- Support for US exceptionalism (but don't bank on it!)
- US exceptionalism fits with view toward international markets, e.g. US needs to be global player/leader
- "Comparison with "big" nukes is not the right approach, SMRs must compete in a new niche"
- Risk of overdependence on Natural Gas is on the radar screen, expectations for solutions vary, not all require government action

# Financing: Nuclear vs. Natural Gas vs. Renewables



- Vogtle 3&4 (\$15B)
  - All forms of financing are being used successfully
  - Debt for Georgia Power is being issued at 0.10% over non nuclear utilities
  - Relies on recovery of costs either through state or coop set rates
- Sabine Pass LNG facility, four trains (\$8B)
  - Owner equity with remainder as project finance
  - \$3.6B Term Loan A secured, \$1.5B debt offering was oversubscribed
  - Relies on 20 year off take contracts and confidence in construction
- Sun Desert Solar Project (\$2.3B) \$1.7B project finance with \$1.5B 80% guaranteed by DOE, supported by long term off take contracts, oversubscribed
- CCCT's (\$250M) all combinations of owner equity, debt and project finance
- Wind Farm (\$50-150M) owner equity and project finance, relies on smaller financing size, off take contracts and substantial policy support (PTCs)

**SMRs need to observe and learn**

# Conclusions and Recommendations regarding SMRs and Wall Street



- Wall Street
  - Is focused on natural gas, but is alert to risk of overdependence
  - Sees SMRs as possibly new and different from the “big” reactor experience
  - Has yet to take a definitive view of SMRs
  - Likes the smaller financing requirement associated with SMRs
  - Is focused on the short term, sees SMRs as “in the future”
- Recommendations to DOE
  - Appreciate the opportunity provided by a “blank slate”
    - Beware and immunize against hype, “under commit, over perform”
    - Acknowledge today’s circumstances and uncertainties, DOE’s SMR program is about providing answers for the future
  - View Wall Street as a strategic player for SMRs
    - Build relationships with a tailored approach
    - Engage Wall Street’s competitive spirit and talent for financial creativity

Thank You

Questions?